VERNON ROYAL LINE

Mayhew
1962

Journal

Jan. 3

Val Verde, Riverside Co., Calif.

Walt Maberly, Bill Truesdell & I left UCR at 1345, and reached Val Verde at 1405. We went to see if any Scaloporus orcutti had emerged from hibernation yet. The day was very mild, as have been the past couple of weeks. However, no sign of S. orcutti could be found. We saw 13 Uta stansburiana and caught two of them. They were given to graduate student Kenneth Evans upon our return to UCR. No other reptiles were seen. We left Val Verde at 1520, reaching UCR at 1540.

Jan. 24

Glamis area, Imperial Co., Calif.

Walt Moberly, Lon McClanahan, Yair Cassuto (Israeli graduate student), and I left UCR at 0900. The sun was shining brightly when we left, but the sky became overcast about Cabezon. Rain began to fall on us slightly south of Indio. It rained fairly hard on us until we reached Brawley. We learned it had started raining about 3 AM in Brawley, & had continued ever since (about 2 PM at the time). It was still raining when we reached Glamis, and was raining very hard in the Chocolate Mts. at that time. At dark we drove from Glamis to Amos & back

Jan. 24

Glamis area, Imperial Co., Calif.

listening for Scaphiopus couchi. Water was in 5 of the storm channels from the Chocolate Mts., somewhat similar to last Sept., but we heard no S. couchi. The air temp. at the time, however, was only about 6°C. Ike Harris, signal maintainer for the Southern Pacific Railroad that lives at Glamis, patrolled the tracks all the way northwest to Mammoth Wash without hearing any S. couchi. E.C. Van Der Poel measured 0.33 inch of rain at Glamis, which was 0.08 inch more than fell in Sept. to bring these toads out. Ike Harris told me he found a young S. couchi near his house last month (December) during a very warm spell (temps. in the 90's). This animal was in a puddle of water Ike had placed by a tree to irigate it. Unfortunately, his dog killed the toad before Ike could rescue it. Ike arranged for us to spend the night in a vacant Southern Pacific Railroad section gang house at Glamis, so we were out of the rain.

Jan. 25

We dug for S. couchi under some of the railroad trestles without success. There just isn't any way to tell

Jan. 25

Glamis area, Imperial Co., Calif.

where they might be. It appears that considerable more water stands in the washes southeast of Glamis (toward Ruthven) than to the northwest (toward Amos). Ike says he hears more toads in that direction.

During the afternoon we dug out some perennials in the Algodones Dunes to check for tap roots. Our results:

A Coldenia 10" high had a taproot 32" long.
An Eriogonum ~6½" " " " >5' "
A Croton 52" " " - " " 18" "
" " 25" " " " " >35" "
" " 5' " " " " >(at least) 5' "

(Frank Vasek said later, from our description of the roots, these taproots may have gone down 6-8 feet deeper as very fine roots).

We never got down to the roots of an Ephedra californica. The stems were covered with sand at least 2 feet deep, and we couldn't expose the roots because of cave-ins. However, the roots must go to considerable depths, judging from our digging operations. (Coldenia plicata, Eriogonum deserticola, and Croton californica were the species excavated.)

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Jan. 25

Glamis area, Imperial Co., Calif.

Later we checked soil moisture depth, & found the sand was damp for the top 24". Very few annuals were seen emerging in the dunes, but lots of small annuals were seen between the two canals. a number of Hesperocallis have already grown to 6" in height, but none are blooming yet. I was unable to identify the other young annuals. Late that afternoon we drove east to the Chocolate Mts., then north to Midway Wells. We camped for the night about 2 miles north of Midway Wells.

Jan. 26

We returned to UCR today by way of Palo Verde, Desert Center, Dale Dry Lake, Pinto Mts., Pinto Basin, and Indio. a number of annuals were in bloom 6 miles north of Desert Center. They were: Baileya pleniradiata
Palafoxia linearis
Garea cancscens
Abronia villosa
Oenothera clavifornis
Oenothera primiveris
Oenothera deltoides
Dithyrea californica
Cryptantha sp.

Jan. 26

Desert Center area, Riverside Co., Calif.

Stillingia
Plantago
Dalea mollis and astragalus sp. were also present, but not in bloom.

Dale Dry Lake apparently was missed by the last storm. The top 3 or 4 inches of sand were totally dry. Then there was a moist layer about 6 inches thick before dry sand again. We saw no sign of annuals there. Joshua Tree Natl. Monument also appeared to be quite dry at this time. We reached UCR at 1650 after a trip of 575 miles.

Jan. 29

Lovejoy Butte area, Los Angeles Co., Calif.

Walt Moberly, Donna Hobbs, Yair Casanto & I left UCR at 0915 to check conditions at my Sceloporus magister collecting site. Snow was still on the ground in spots around Phelan. However, Yair was able to see 2 Citellus leucurus active today. No reptiles were seen. The collecting area hasn't changed appreciably since I last saw it. I think we should be able to get a reasonable sample there this year. We returned to UCR at 1400 after driving 161 miles.

Feb. 21

Palm Springs area, Riverside Co., Calif.

Walt Mobely, Bill Truesdell & I left UCR at 0915. We reached Granddaddy Dune at 1030. The sand was quite damp from the last rain — there were puddles of water standing in some places. The soil was wet at least 8" down. The air temperature was cool (13°C), even in the sun. No trace of any animals were seen — not even tracks. Winter is still present here, although a few annuals were in bloom (Dithyrea, Abronia, Geraea, Astragalus), as well as a few blossoms on Larrea divericata. The same situation prevailed at Palm Springs Panorama. They are spraying tremendous quantities of water on newly-planted grass; so everything looks green. However, no animals were seen. We learned today that residential lots begin at $4,000, houses on lots range from $18,000 to $31,500. We returned to UCR at 1400.

Mar. 14

Glamis area, Imperial Co., Calif.

Dr. Tracy I. Storer, Lloyd Tevis and I drove out to see the Scaphiopus couchi habitat we found last September. Even though winter still has that region in its grip, those washes looked very grim and forbidding for any amphibian.

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Mar. 14

Glamis area, Imperial Co., Calif.

The sun shone all day, and we were there at the hottest time of the day, but only one reptile (immature of Uma notata) was seen on the entire trip. A very few additional tracks were seen in the sand. Lots of Oenothera deltoides were in bloom between the canals, but all the plants were small (<4" high). Lots of other plants are above the ground, but aren't ready to bloom yet. Some desert lilies (Hesperocallis) were in bloom, but many weren't yet. The soil was visibly moist between the canals to a depth of about 1½ inches. Most of the annuals that were in bloom were seen along the western border of the Salton Sea (Salton Riviera). Most of the plants were Oenothera claviformis. The only plant seen blooming in the algodones Dunes was Helianthus niveus. Only a few plants contained flowers, & then only one or two blossoms. No annuals were seen coming up on the dunes (at least, on the big dune — the only place we stopped). In January, Imperial County dedicated the top of the big dune & Dune Crest Drive as Osbourne Lookout Park.

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March 28

Palm Springs, Riverside Co., Calif.

This morning Walt Moberly & I left UCR at 0915 to see if any lizards were active yet. We saw 17 Uma inornata, 11 Dipsosaurus dorsalis, 1 Callisaurus draconoides, 1 Crotalus cerastes, & 1 Crotaphytus wislizeni. Of these, we caught 11 Uma, 11 Dipsosaurus, 1 Crotalus, & 1 Crotaphytus. We looked for lizards from 1020 to 1355. The sky became quite overcast shortly after noon. The environment cooled somewhat after that, which presumably drove the remaining animals underground. We talked to Lloyd Tevis for a while, then returned to UCR (at 1700). Lots of annuals are in bloom (particularly Chaenactis fremontii, Ditheyia calif., & Malacothrix calif.) at the eastern edge of Palm Springs. Their numbers drop rapidly, however, as one approaches the Whitewater River channel near Palm Springs Panorama. No flowers are blooming in the vicinity of the Panorama except in the irrigated regions. Even here there aren't many flowers, but lots of grass (planted) is several inches high. Lots of lupines are through blooming there.

Apr. 3

Glamis area, Imperial Co., Calif.

Don Hunsaker had his class from San Diego State out to the dunes on March 25th. He reported only one (seen ~1630) Phrynosoma m'calli (about 9 mi. W. of Glamis) seen during the trip. No Coleonyx variegatus were collected on the road that night.

Apr. 13

I left UCR at 1335 with the field zoology class. We reached the Glamis area at 1720. We began night collecting at 1915, and at least one of the two vehicles was on the road until 0030. I collected the Coleonyx variegatus I needed for a monthly sample (15 animals) and we toe-clipped & released the rest of them that we caught. 25 were toe-clipped tonight, making a total of 40 animals captured tonight. 7 ind Crotalus cerastes were seen tonight also. Two Chionactis occipitalis were also collected on the road. The minimum temp. tonight was 72°F.

Apr. 14

We arose at 0535 & ate breakfast. I took 1/3 of the class with me into the dunes, Walt Mobley took another 1/3 to the cerastes bush south west of the Coachella Canal, & Bill Truesdell took the remaining 1/3 to collect on the road. We began

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Apr. 14

Glamis area, Imperial Co., Calif.
collecting at 0700. Then we changed groups of students at 0900. We quit for the morning at 1100. After going to Shirley Hill's home in El Centro for ice cream during the hot part of the day, we returned to our respective collecting areas at 1715, working there until sundown. We had planned to night collect, but the Imperial Valley Dune Buggy Assoc. moved into our campsite (Osbourne Park) so we camped 1 mile east of Glamis. Four additional Coleonyx variegatus were toe-clipped & released as we drove to our campsite. Min. temp. tonight - 63°F.

Apr. 15

We arose at 0630 & ate breakfast. Then I showed the class where we found Scaphiopus couchi last fall. We all collected along the road as we left the area. However, this was so late, Dipsosaurus, Callisaurus, & Cnemidophorus tigris were the only animals still active. A brief stop was made at Ramer Lake as we started home. We returned by way of Warner's Hot Springs. The wildflowers were beautiful around Sage. We reached UCR at 1905 after a trip of approximately 515 miles.

Apr. 15

Glamis area, Imperial Co., Calif.

We captured 205 animals of 13 species, as follows (some Crotalus cerastes were later released):

Crotalus cerastes – 12 (several released)
Chionactis occipitalis – 2
Masticophis flagellum – 1
Dipsodomys merriami – 2
Uta stansburiana – 3
Crotaphytus wislizeni – 4
Callisaurus draconoides – 2
Urosaurus graciosa – 32 (1 released)
Coleonyx variegatus – 44 (29 released)
Phrynosoma m'calli – 22 (+3 DOR seen)
Dipsosaurus dorsalis – 26
Cnemidophorus tigris – 5
Uma notata – 50 (30 released)

We brought home 130 animals, and released the remainder in the field after they were toe-clipped (except C. cerastes).

Apr. 17

UCR campus, Riverside Co., Calif.

This afternoon a girl (I didn't learn her name) brought me three Sauromalus obesus males she had collected last Sunday near Lucerne Valley, San Bernardino County, Calif. All three were fully adult. One had been in a fight with one of her mates, but the other two were in fine shape.

April 21

Blue Ridge, Los Angeles Co., Calif.

Walt Moberly & I left UCR at 1205 for a 3-day collecting trip. We reached Blue Ridge & began looking for lizards at 1330. The air was quite cool (12.5°C), but several lizards were out. By 1710, when we quit looking, we had captured 12 Sceloporus graciosus (7♂, 5♀), 5 ♂ Sceloporus occidentalis, & 3 Uta stansburiana (2♂, 1♀). Several others, particularly S. graciosus, were seen but not captured. We left Blue Ridge & headed for Lovejoy Buttes.

several caught near snow piles at edge of road.

Lovejoy Buttes, Los Angeles Co., Calif.

We reached the Lovejoy Buttes area about 1930. We couldn't find the spot I had planned to camp in, so we spent the night at Joshua Tree State Park.

April 22

We arose at 0630 and ate breakfast. We began looking for Sceloporus magister along the road west of the buttes at 0830. We saw the first S. magister at 0925 (air temp. at that time - 21.5°C). Except for 20 minutes spent eating lunch (1410 - 1430), we were driving along the road between Lovejoy & Saddleback Buttes looking for lizards until 1825 (sundown about 1827). During that period we caught 2 Phrynosoma platyrhinos, 2 Uta stansburiana, and 23 Sceloporus magister (4 ad ♀, 18 ad ♂, 1 imm ♂). I don't know where all the ♀ were hiding. We didn't even see any ♀ until fairly

April 22

Lovejoy Buttes area, Los Angeles Co., Calif.
late in the afternoon. We missed only one or two that might possibly have been *T.* The *S. magister* all seemed more abundant during the late afternoon. During the morning, however, relatively few animals were seen. This may have been due to the fact that the air temp. last night got down to about 35°F. There are lots of annuals growing + blooming in this region. A number of species are represented. There should be lots of reptile food produced this spring. We left this region at sundown, & headed for 29 Palms. We reached 29 Palms about 2200. After eating we camped at Indian Cove in Joshua Tree National Monument. Min. temp. tonight — 56°F. (Sundown — 1825.)

April 23

Dale Dry Lake area, San Bernardino Co., Calif.

We arose at 0610 & ate breakfast. Then we drove to our collecting site at Dale Dry Lake. We began looking for lizards at 0800, and looked until 1225. *Uma scoparia* were not too numerous (we saw 42 during this period), but we were able to capture several. *Dipsosaurus dorsalis* became reasonably abundant late in the morning. We returned to UCR at 1620 after a trip of 416 miles.

April 23

Dale Dry Lake area, San Bernardino Co., Calif.

The animals captured on the 3-day trip were as follows:

Uta stansburiana – 5

Sceloporus graciosus – 14 (2 released)

Sceloporus magister – 23 (1 released)

Phrynosoma platyrhinos – 2

Cnemidophorus tigris – 1

Dipsosaurus dorsalis – 19 (8 disect.; 11 spec.)

Uma scoparia – 32 (17 held) (15 released)

Sceloporus occidentalis – 5

Thus, a total of 101 animals of 8 species were caught this trip. Several were marked and released however, so we returned with only 83 animals.

April 24

Palm Springs area, Riverside Co., Calif.

I left home at 0700 to get a monthly sample here. I began looking for animals at 0805 along Vista Chino Ave. The first animal seen (Uma inornata) was at 0840. Not too many Uma were seen, either along Vista Chino or in Palm Springs Panorama. Dipsosaurus became rather abundant about noon when I returned to Vista Chino. Maximum temp. I recorded today was only 33°C. Two DOR Crotalus cerastes were seen. One DOR Phrynosoma m'calli ♂ & 1 DOR Dipsosaurus dorsalis ♂ were in good enough shape to save.

April 24

Palm Springs area, Riverside Co., Calif.

In addition, several squashed DOR's were seen but not collected. I quit looking for lizards in that area at 1400 + delivered a sink for the Desert Station to Lloyd Tevis. Then I began looking for lizards again at 1610 along Rio del Sol Road north of Rancho Mirage. By this time the wind was beginning to blow rather hard, so I didn't see many lizards. However, I caught a couple Uma inornata along this stretch. I returned to UCR by the old highway between Indio Palms & Garnet. I saw several Uma inornata, but I was unsuccessful in capturing any. I reached UCR at 1810, after a trip of 145 miles. a total of 27 Uma inornata were seen today. I captured the following:

Uma inornata - 7 (2 released)
Dipsosaurus dorsalis - 15 (3 released)

Thus, I caught 22 animals of 2 species today. The arrival of the wind this afternoon seemed to keep most of the animals inactive later in the day. Numerous tracks were seen where no animals were visible. The tracks were new, because a wind 2 days earlier cleared the area.

May 1

Blue Ridge, Los Angeles Co., Calif.

Donna Hobbs, Bill Truesdell, Pete Allen & I left UCR at 0920 to try to catch some ♀ *Sceloporus occidentalis* above 7,000 feet. Male *S. occidentalis* caught last week up there contained motile sperm in the vas deferens, just as the males (*S. occidentalis*) caught this week on campus. 2 campus ♀♀ contained eggs in the oviducts, so I was very anxious to see if the same situation prevailed at 7,000 feet. Female *S. occidentalis* again were not seen in large numbers (last trip up Walt Mobley & I didn't see a single ♀ *S. occidentalis*). However, we caught several (8) this time. By 1630, when we quit looking for animals we had captured the following:

Sceloporus occidentalis – 28 (20 ♂, 8 ♀)
Sceloporus graciosus – 18 (11 ♂, 6 ♀, 1 juv.)
Uta stansburiana – 6 (2 ♂, 4 ♀)
Eumeces skiltonianus – 1
Total 53

We reached UCR at 1730, after a trip of 110 miles. One adult *Sceloporus occidentalis* was seen eating a half-grown *Uta stansburiana*. The *S. occidentalis* escaped us, however.

May 4

Stoddard Valley, San Bernardino Co., Calif.

I left UCR with the field zoology class at 1330 and drove to Hesperia. We looked for animals in the Joshua tree woodland until nearly dark, then headed for Stoddard Valley by way of Lucerne Valley. We night collected along the road from the north end of Lucerne Valley to our campsite. Only 1 adult ♀ Salvadora magister that had been hit by a car, & 4 Crotalus cerastes were seen on the road alive. a Masticophis flagellum that contained a Cnemidophorus tigris was found DOR. No mammals caught in traps tonight.

May 5

We arose at 0530 and ate breakfast. Then we scoured the countryside for animals until about 1100. The class found far more animals than I had expected them to locate. In all, 17 Uopherus agassizi were found at this location, along with numerous lizards, & 1 Salvadora hexalepis (also some more [3] Crotalus cerastes). after lunch we looked for Sauromalus obesus and Crotaphytus collaris in the rocky area south of our campsite. Then we left this area, and headed for Dale Dry Lake, which

May 5

Dale Dry Lake, San Bernardino Co., Calif. we reached about 2000. We collected 2 Coleonyx variegatus and saw 3 Crotalus cerastes between 29 Palms and Dale Dry Lake.

May 6

We arose at 0630 and ate breakfast. Then Walt Mobely took part of the class north of the road at our campsite while I took the rest down to our collecting area near Iron age Mine Road. We both collected until about 1100, then ate lunch. Later we drove up Gold Crown Mine Road past Old Dale to look for Sauromalus obesus and Crotaphytus collaris. Then we returned to UCR via 29 Palms. We reached UCR at 1810 after a trip of 381 miles.

We captured, and kept or released 260 reptiles of 18 species on the trip, as follows:

Uosaurus graciosa - 4 (3♂, 1♀)
Coleonyx variegatus - 2 (1 ad ♀, 1 ad ? ♂)
Xantusia vigilis - 4
Crotaphytus collaris - 6 (5♂, 1♀)
Crotaphytus wislizeni - 11 (8♂, 3♀)
Cnemidophorus tigris - 24 (14♂, 10♀)
Dipsosaurus dorsalis - 39 (14 ad, 25 imm.)
Phrynosoma coronatum - 1

May 6

Dale Dry Lake, San Bernardino Co., Calif.

Phrynosoma platyrhinos – 12 (6♂, 4♀, 2 imm.)
Scelaporus magister – 7 (4♂, 1♀, 2 imm)
Scelaporus occidentalis – 12 (8♂, 4♀)
Sauromalus obesus – 9 (8 ad, 1 imm)
Callisaurus draconoides – 29 (15♂, 8♀, 6 imm)
Uma scoparia – 61 (10♂, 13♀, 38 imm)
Uta stansburiana – 8 (1♂, 6♀, 1 imm)
Salvadora hexalepis – 1
Crotalus cerastes – 12
Sonorus agassizi – 18

Five young Dipsosaurus dorsalis were measured & released at the site of capture. Other animals were released near campsites.

May 12

Glamis area, Imperial Co., Calif.

Walt Moberly & I left UCR at 1020, and reached the Highline Canal at 1340. There was a brisk SW wind blowing 15-20 mph. at the time we arrived. We looked for Uma notata from 1500 to 1600 after we made one pass down the road looking for Phrynosoma m'calli. We drove along the road again from 1600 to 1700, but saw no reptiles of any kind. We night collected from 1900 to 2015, but the wind was blowing so hard we had little success. One adult ♀ Coleonyx variegatus

May 12

Glamis area, Imperial Co., Calif. was all we saw on the road tonight. The maximum temp. we recorded today was 24°C., the minimum temp. tonight was 10°C. We slept in an S.P. section hands shack tonight, thanks to Ike Harris.

May 13

We arose at 0815 & ate breakfast. We caught some Uma notata as we drove through the dunes. Then we drove along the road between the canals looking for Phrynosoma m'calli + Dipsosaurus dorsalis.

After lunch (we ate at 1300) we went into the dunes again for Uma notata + Urosaurus graciosus. However, the wind began to blow again, and it blew so hard we found few lizards. We waited until dark to see if the wind would die down sufficiently to permit night collecting. However, it blew harder after dark, so we made one pass between Glamis & the Highline Canal, then headed for home. The only animal seen on the road was a Chionactis occipitalis. The maximum temp. today was 32.0°C. We reached 4 CR at 0035 after a total trip of 398 miles. We caught 60 animals alive, 8 of which were released.

May 13

Glamis area, Imperial Co., Calif.

The reptiles collected were as follows:
Dipsosaurus dorsalis – 9 (2 released)
Phrynosoma m'calli – 14 live (13 kept) (5 DOR) (3 released)
Callisaurus draconoides – 1
Uma notata – 18 live, 1 DOR (2 released)
Urosaurus graciosa – 13
Crotaphytus wislizeni – 1
Chionactis occipitalis – 1 (released)
Coleonyx variegatus – 1
Sceloporus magister – 2

May 18-20

San Jacinto Mts., Riverside Co., Calif.

The field zoology class left UCR at 1830 for the week-end. We drove through Bautista Canyon, southeast of Hemet to examine some chaparral habitat. The area contained numerous flowers in bloom. Then we drove to Anza, Mt. Center, & Idyllwild before reaching our campground at Fern Basin, north of Idyllwild. The night felt quite cool, but the temperature dropped to only 38°F. We looked for birds + lizards in this vicinity until afternoon, then drove to Black Mountain campground to the north. (Fern Basin is 6000 feet, Black Mt. 7600 feet above sea level). Snow was still on the ground in patches, so the air temperature was rather low. The

May 18-20

San Jacinto Mts., Riverside Co., Calif.

temperature reached 30°F during the night. We looked for birds and reptiles up as high as Tarview Point (7720 feet elevation), then retraced our route to highway 91. We stopped at Indian Hill Road (½ mi. S. of Lake Fulmor) to look for animals, but we saw relatively few. However, the sky was almost completely overcast and a strong wind was blowing. We made one more stop about 3 miles south of Banning to look for Xantusia henshawi. Then we returned to UCR, ~~at~~ arriving at 1625, after a trip of 181 miles. We saw 62 species of vertebrates on the trip, and captured 98 ~~reptiles~~ reptiles + amphibians of 9 species. The captured ones were:

Sceloporus occidentalis - 12
Sceloporus orcutti - 4
Sceloporus graciosus - 56 (43 ad, 13 juv.)
Uta stansburiana - 13
Xantusia henshawi - 8
Phrynosoma coronatum - 2
Cnemidophorus tigris - 1
Lampropeltus getulus - 1
Bufo boreas - 1

A large sample of Sceloporus graciosus was sent to Don Hunsaker at San Diego State College.

May 18-20

San Jacinto Mts., Riverside Co., Calif.

The following were kept for reproductive cycle data:

Sceloporus occidentalis - 10
Sceloporus orcutti - 4
Sceloporus graciosus - 17
Uta stansburiana - 13
Xantusia henshawi - 7
Phrynosoma coronatum - 1

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May 24

Palm Springs, Riverside Co., Calif.

I left Riverside at 0710, and arrived at the collecting site on Vista Chino at 0815. I measured and released 26 Dipsosaurus dorsalis Walt Moberly had been using for experiments. The weather was still quite cool, but I began to look for lizards anyway. The first lizard (ad. ♂ Uma inornata) was seen at 0845. This was in Palm Springs Panorama. The wind increased in intensity as the morning progressed. It was blowing 15-20 mph. by mid-morning. There was no overcast, however. After touring the Panorama for several hours (dodging trucks hauling sand off the Panorama streets) I returned to Vista Chino. By 1230 I decided the wind was too much for me, so I started

May 24

Palm Springs, Riverside Co., Calif.

for UCR, which I reached at 1350. The trip covered 139 miles. I caught the following animals:

Uma inornata - 8 (7♂, 1♀)

Dipsosaurus dorsalis - 7 (5♂, 2♀)

June 3

Idyllwild area, Riverside Co., Calif.

I was able to capture several lizards today while on a work party at Azalea Trails Girl Scout Camp (elev. - 6800 ft.) (11 mi. N. of Idyllwild). Bobby, Bruce & I hauled garbage and junk from the camp to the dump south of Bluebird Hill (S. of Idyllwild) in our pick-up. Each time we drove the dirt road leading to the camp we caught a few lizards. At the end of the work party we stayed at the camp and caught some more lizards. In all, the 3 of us caught 25 lizards of 3 species. The 2 immatures were released, so we returned with 23 lizards, as follows:

Sceloporus graciosus - 21 (12♂, 9♀) (1 imm. released)

Sceloporus occidentalis - 1♂ (1 imm. released)

Uta stansburiana - 1♂

Two Sceloporus orcutti were seen at Dark Canyon Campground (elevation 6000 ft), but we couldn't catch them. We quit looking for lizards at 1600.

June 5

Dale Dry Lake, San Bernardino Co., Calif.

Walt Mobley & I left UCR at 0500. We reached the collecting area at 0700. We began looking for lizards at 0720, but apparently were too early. We waited until 0800 and began again. No animals were seen until 0830. Reptiles never were abundant, nor were their tracks. The area is so dry, apparently many of the reptiles have died off. We looked for reptiles until 1215. By that time we had seen 1 Crotalus cerastes, 10 Dipsosaurus dorsalis, and 25 Uma scoparia, as well as 1 Urosaurus graciosa. We captured 34 lizards of 3 specis. 4 Uma scoparia and 2 Dipsosaurus dorsalis were measured and released. We brought the following animals back to the laboratory:

Urosaurus graciosa – 1 ♂
Uma scoparia – 21 (16 ♂, 5 ♀)
Dipsosaurus dorsalis – 6 (4 ♂, 2 ♀)
Total – 28

We reached UCR at 1540 after a trip of 218 miles.

June 12

Colorado Desert, San Diego & Imperial Cos., Calif.

Kenneth Evans, Dave Reuther & I left for the desert at 0720. We went down by way of Warner's

June 12

Colorado Desert, San Diego & Imperial Cos., Calif.

Hot Springs & Earthquake Valley to the Coyote Mts. (near Coyote Wells, Imperial Co., Calif.). I had heard about Phyllodactylus tuberculosis being collected in these hills, but we couldn't find any sites that even looked promising. Therefore we drove to Highway 80, then west toward Jacumba. We pried flakes off rocks for some time, but found no animals. Then we drove Highway 98 toward Calexico, looking for animals as we went. Two Dipsosaurus were all we caught, or even saw. We then drove east of Calexico on highway 98, looking for Phrynosoma m'calli. The weather was favorable, but no animals were seen. We drove to the Highline Canal west of Glamis & ate dinner. Then we began night collecting along the road between the canals. We collected from 1935 to 2240. Coleonyx were on the road early in the evening, but the weather was rather cool, so none were seen after 2200. We saw 3 Crotalus cerastes during this period, as well as 1 DOR Phrynosoma m'calli. Several Lepus californicus were seen along the road as well.

June 13

Glamis area, Imperial Co., Calif.

We arose at 0515 and ate breakfast. We began looking for Phrynosoma m'calli along the road at 0610, but none were seen until 0800. a juveral Uta stansburiana was seen at 0715, which was the first reptile seen this morning. We stopped looking at 1050, since no animals (P. m'calli) were seen after 1000. after lunch we looked for Uma notata in the dunes from 1240 to 1345. It was so warm at that time (100°F – air temp.), we spent some time in the Glamis store, then returned for Uma at 1515. However, the wind was blowing so hard by this time that few animals could be seen. Consequently, we quit at 1600 & drove the road slowly toward Brawley, hoping to find some P. m'calli. One P. m'calli was found, in spite of the wind. After eating in Brawley (because of the wind), we night-collected one pass between the canals; we found one Coleonyx variegatus. We quit for the night at 2015, since sand was blowing across the road rather abundantly by this time.

June 14

Glamis area, Imperial Co., Calif.

We arose at 0630 and ate breakfast. The wind was still blowing, causing the air temp. to be quite low (20°C). We drove to the dunes to try to catch Uma notata. We looked from 0845 to 1045. By then the sand was blowing so hard it made lizard catching nearly impossible. During our stay in the dune area I saw 96 Uma notata, but many of them were immature. We looked for animals along the road as we left, but we saw only one immature Dipsosaurus dorsalis in the dunes about a mile east of the Coachella Canal. We returned home by way of Ocotillo Wells & Warner's Hot Springs. We got the windshield frosted between Salton Sea and Ocotillo Wells. I haven't seen such a sand storm since I left the Sahara. We reached UCR at 1645, after a trip of 562 miles. We caught 73 animals of 11 species, as follows:

Crotalus cerastes - 3 (all released)
Pituophis catenifer - 2
Lampropeltis getulus - 1
Crotaphytus wislizeni - 1 (♀)
Sceloporus occidentalis - 1 (♀)

June 14 — Glamis area, Imperial Co., Calif.

Cnemidophorus tigris - 1 (♀)
Coleonyx variegatus - 15 (8♂, 7♀)
Dipsosaurus dorsalis - 7 (2♂, 3♀) (2 released)
Phrynosoma m'calli - 11 (8♂, 3♀) (3 DOR seen)
Urosaurus graciosa - 10 (5♂, 5♀)
Uma notata - 21 (6♂, 10♀ ad.) (5 released)
We kept only 40 animals of 8 species for dissection.

June 21 — Palm Springs, Riverside Co., Calif.

Walt Moberly + I left UCR at 0605, and arrived at our collecting area along Vista Chino at 0700. A small wash, just east of the housing development with the brick fence on Vista Chino, contained the only green Larrea divericata around. We decided to walk around this area a bit. We found it rather full of Uma inornata with some Dipsosaurus dorsalis also present. By the time (0900) we stopped looking in this green belt, we had captured 20 Uma inornata, 8 Dipsosaurus dorsalis, and 2 Crotaphytus wislizeni. Four of the Uma escaped through a hole in a sack, however. Then we drove down to Palm Springs Panorama, which is quite dry right now. We caught 6 Dipsosaurus dorsalis there before we returned

June 21

Palm Springs, Riverside Co., Calif.
to Vista Chino. It was getting quite warm by this time (1010 — 41.0°C air temp.), so we caught only 2 Dipsosaurus dorsalis + 1 Crotaphytus wislizeni. We quit looking for lizards at 1030 + headed for UCR. We reached UCR at 1145 after a trip of 119 miles. Our catch for the morning:
Uma inornata — 20 (10♂, 6♀) (4 escaped: 3♀, 1♂)
Dipsosaurus dorsalis — 16 (10♂, 2♀) 4 released
Crotaphytus wislizeni — 3 (♂)
Total 39
We brought 31 back for dissection.

June 26

Hesperia, San Bernardino Co., Calif.
Walt Moberly, Bill Truesdell, Kenneth Evans + I left UCR at 0620 to get a June sample of Sceloporus spp. in the Mojave Desert + San Gabriel Mts. We looked for Sceloporus magister around Hesperia from 0715 to 1245. We captured 18 of them during this period. Most of the animals were found on the west side of Hesperia. Then we drove toward Phelan to gather a sample of Sceloporus occidentalis. However, the wind was blowing rather hard by this time, so we saw no lizards. Therefore, I decided to go to Blue Ridge to try to get a

June 26

Blue Ridge, Los Angeles Co., Calif.

Sceloporus graciosus sample, although a strong wind was blowing from the southwest, we were able to find lots of S. graciosus on the lee side of the hill. Only one S. occidentalis was collected at this location, but a good sample of S. graciosus was obtained by 1720. We ate dinner at Big Pines Campground, but it began to get very cool as the sun disappeared behind the hills. Consequently, we decided to return to the desert to camp for the night. Then we could look for S. occidentalis at the lower elevation the next morning. Therefore, we left the Big Pines area.

(Looked for S. graciosus from 1450 to 1720)

Saddleback Buttes area, Los Angeles Co., Calif.

We drove to Llano, then past Lovejoy Buttes to Joshua Trees State Park near Saddleback Buttes. One Coleonyx variegatus (?) was collected near a rocky slope between Lovejoy and Saddleback Buttes. I think this is the only one we have collected in Los angeles County so far.

June 27

We arose at 0615 and ate breakfast. We began looking for S. magister at 0720 near Saddleback Buttes.

June 27

Saddleback Buttes area, Los Angeles Co., Calif.

We found them to be quite abundant in this region yet, even though we have collected quite a few here in the past. We captured 12 this morning as we drove toward Lovejoy Buttes. This gave us a large enough sample of S. magister, so we didn't bother to stop for other S. magister we saw near Lovejoy Buttes. Instead, we returned to Phelan to look for S. occidentalis.

(Quit looking- 0845)

Phelan, San Bernardino Co., Calif.

For some reason we didn't see a single S. occidentalis in the entire area where we have captured large numbers in the past. The temperature was not so hot that all the animals should have been out of sight. Nevertheless, we didn't find a single lizard from Phelan to Wrightwood.

Blue Ridge, Los Angeles Co., Calif.

We returned to Blue Ridge to try to get a sample of S. occidentalis at that elevation. However, they were nearly as hard to find here as they had been around Phelan. Lots of S. graciosus were seen,

June 27

Blue Ridge, Los Angeles Co., Calif.

but we already had a good sample of this species (22). Consequently, we caught a few more S. graciosus for temperature data, then released them. Only a couple of S. occidentalis were seen before we left the area at 1400. We returned to UCR by way of Crystal Lake and Azusa. The road from angeles Crest Highway to Crystal Lake is finished now, so that route makes a very scenic way home. We caught several S. occidentalis at Crystal Lake as we passed through the area. We reached UCR at 1830 after a total trip of 282 miles. During the trip we caught the following animals:

Uta stansburiana - 5 ♂ (Given to Ken Evans)
Phrynosoma coronatum - 2 (Given to Ken Evans)
Cnemidophorus tigris - 1 (♀)
Coleonyx variegatus - 1 (♀)
Sceloporus occidentalis - 9 (7 ad ♂, 1 ad ♀, 1 im ♂ - released)
Sceloporus graciosus - 26 (20 ♂, 6 ♀ - 4 ♂ released)
Sceloporus magister - 30 (12 ad ♂, 10 ad ♀, 2 ad? ♂, 6 ad? ♀ - 1 ♀ released)

Total 74 (7 species)

We kept 61 (for reproductive data) of 5 species. These will be dissected when we reach the lab.

July 11

Palm Springs, Riverside Co., Calif.

Walt Moberly + I left UCR at 0600 to get our monthly lizard sample. We began looking for lizards at 0700. The sky was about 50% overcast, and a 3-5 mph breeze was blowing from the northwest. We collected in the shallow wash east of the subdivision on the south side of Vista Chino ave. again. This time, however, we walked considerably farther south than before. Naturally the Uma population in that small area seemed somewhat reduced. Nevertheless, we were able to get a reasonable sample of U. inornata there. There seemed to be more Dipsosaurus dorsalis here this time, but this may have been because we left this area shortly after Dipsosaurus emerged last time. We collected until 1010. By then we had captured 42 lizards of 6 species, as follows:

Phrynosoma m'calli – 3 (2♂, 1♀)
Crotaphytus wislizeni – 2 (♂)
Callisaurus draconoides – 1 (♂)
Urosaurus graciosa – 2 (1♂, 1♀)
Uma inornata – 13 (7♂, 6♀) (1♂ [imm.] released)
Dipsosaurus dorsalis – 21 (11♂, 7♀, [3 imm. released])

We reached UCR at 1120 after a trip of 129 miles.

July 17

Dale Dry Lake, San Bernardino Co., Calif.

Walt Moberly, Dave Reuther & I left UCR at 0500 for our monthly sample. We reached the collecting area at 0700 and immediately began to collect animals. The weather was perfect today for catching lizards — no wind or overcast, not hot too early (didn't reach 100°F. until nearly 1100). We quit walking for lizards at 1100, then drove slowly along the road looking for lizards from 1105 to 1140. By then a SE wind had risen to 5–8 mph. We were able to capture 41 lizards of 4 species, as follows:

Uma scoparia – 26 (12 ad ♂, 12 ad ♀)(2 imm. released)
Dipsosaurus dorsalis – 10 (5 ad ♂, 2 ad ♀)(3 imm. released)
Callisaurus draconoides – 2 (1 ♂, 1 ♀)
Urosaurus graciosa – 3 (2 ♂, 1 ♀)

Animals were not really abundant today. Wind had removed nearly all animal tracks — probably yesterday, since only Dipodomys tracks and the tracks of other nocturnal species were all that could be seen when we first arrived — so any activity today should have been apparent. However, few lizard tracks were seen during our stay. We reached UCR at 1425 after a trip of 223 miles.

July 19

Glamis area, Imperial Co., Calif.

Walt Moberly, Fritz Zaebst, Dave Reuther & I left UCR at 0900 for our monthly collecting trip. We drove along Vaaner Road (between 1000 Palms & Garnet) looking for lizards on the way down to Glamis. We looked for animals along this road from 1000 to 1200. We stayed beside the Highline Canal until the soil surface temp. dropped to 45°C. Then we looked for lizards along the road from 1510 to 1710. Then we walked in the dunes, looking for Uma notata & Urosaurus graciosa until sundown (1850). after we ate, we drove the road looking for Coleonyx variegatus. The weather was just about ideal for night collecting, but we found only 2 animals. We drove the road from 1955 to 2120. Maximum temp. today was only 103°F., minimum temp. tonight was 80°F. Today 4 juvenile Callisaurus draconoides were seen along the road, as well as one juvenile Uma notata.

July 20

We arose at 0520 & ate breakfast. We began looking for lizards along the road at 0625. We made 3 passes between the canals without seeing very many lizards. We caught only 5 Phrynosoma m'calli, 1 Dipsosaurus dorsalis & a couple of Crotaphytus wislizeni. We quit looking

July 20 Glamis area, Imperial Co., Calif.
along the road at 1000. During the drive we saw 1 DOR Phrynosoma m'calli and 18 juvenile Callisaurus draconoides. We rested under the Coachella Canal bridge until 1630, then returned to the dunes for Uma and Urosaurus. We looked for lizards until shortly after sundown (sundown-1845; we quit 1855). After eating chow, we night collected from 1935 to 2200. Coleonyx variegatus were somewhat more numerous on the road tonight than last night. However, the temperature is somewhat higher, and so is the humidity! We caught 5 Coleonyx tonight, including a young one. The minimum temp. tonight was 86°F. We were chased off the big dune (Osborne Park) about 0030 by the wind + sand.

July 21 We arose at 0615 and ate breakfast. Then we drove the road between the canals looking for lizards from 0655 to 1125. We saw 5 DOR Phrynosoma m'calli and lots of DOR Callisaurus draconoides juveniles. The sky was completely overcast all morning, with no breeze blowing. Consequently, the humidity was rather unbearable. However, 6 Phrynosoma m'calli were captured during the morning.

July 21

Glamis, Imperial Co., Calif.

We reached UCR at 1520 after a total trip of 447 miles. We caught 96 lizards of 7 species, and obtained information from 7 DOR's of 2 species. Also, 19 lizards of 6 species were released after capture & measurement. Those caught were:

Crotaphytus wislizeni - 3 (♀)
Uma notata - 32 (16 ad ♂; 8 ad ♀; 4 im ♂; 4 im ♀) (8 released)
Callisaurus draconoides - 8 (4 ad ♂; 3 ad ♀; 1 im ♂) (1 released)
Coleonyx variegatus - 7 (5 ad ♂; 1 ad ♀; 1 im ♂) (1 released)
Urosaurus graciosa - 25 (9 ad ♂; 11 ad ♀; 5 im) (5 released)
Dipsosaurus dorsalis - 10 (4 ad ♂; 3 ad ♀; 3 im) (3 released)
Phrynosoma m'calli - 11 (1 ad ♂; 9 ad ♀; 1 im ♀) (released)

Upon dissection in the lab. I found P. m'calli ♂♂ still in apparently full reproductive vigor. Males of the other species, however, seem to be well past reproductive prime for this season. Nearly all had sperm at the terminal end of the vas deferens, but very few of these sperm were still motile.

July 25

Hesperia, San Bernardino Co., Calif.

Donna Hobbs, Walt Moberly, Dave Reuther & I left UCR at 0610. We reached the collecting area at 0655. We began looking for lizards immediately, & found our first one (Sceloporus magister) at 0700. We looked for S. magister until 1000, by which time we had

July 25 Blue Ridge, Los Angeles Co., Calif.

captured 13. Then we drove to Big Pines by way of Phelan. No lizards were seen along this route, although Frank Aubrey & I captured large numbers of S. occidentalis and some S. magister along this route in 1959. We looked for lizards at Blue Ridge from 1200 to 1620. Then we returned to UCR, arriving there at 1755 after a trip of 155 miles.

We caught the following animals today:

Sceloporus occidentalis - 3 (2♂, 1♀)
Sceloporus magister - 13 (8♂, 5♀; 1 im ♂ released)
Sceloporus graciosus - 42 (18♂, 24♀)
Total 58 (1 released)

Aug. 3 Glamis area, Imperial Co., Calif.

Pete Allen, Donna Hobba, Valerie Ernst & I left UCR at 1645. We reached the Highline Canal at 2000 and immediately began to look for Coleonyx variegatus. We looked until 2130, but saw only 1 adult and 1 juvenile. The weather appeared to be ideal, but no other lizards were seen. Minimum temp. tonight was 56°F.

Aug. 4 We arose at 0530 and ate breakfast. We looked for lizards along the road from 0630 to 1050. We were able to make only one round trip between the canals during this time. However, we caught 1 juvenile

Mayhew
1962

Aug. 4 Glamis area, Imperial Co., Calif.
Cnemidophorus wisizeni, 1 adult Uma notata (♂), 6 Dipsosaurus dorsalis (1 ad, 5 imm.), and 12 Phrynosoma m'calli (4 ad ♂, 5 ad ♀, 3 juv.) plus 3 DOR P. m'calli. Lots of juvenile Callisaurus draconoides and 2 juvenal Uma notata were seen. We rested under the bridge across the Coachella Canal until 1620. Then we went into the dunes 3 miles west of Glamis. At this spot there are lots of Palo Verde + some associated plants (Prosopis juliflora, Larrea divericata). We looked for lizards until 1810. Several Uma notata were seen when we first started into the area, but few were seen when we got into the relatively thick palo verde. One Urosaurus graciosa was seen in a Prosopis juliflora, and 2 were seen in Cercidium floridum, but no others were seen. We caught 1 Urosaurus and 9 Uma while we were out there. It does not seem to contain very large numbers of lizards. The maximum temp. today was 103°F., which is very comfortable out here at this time of year.

We looked for Coleonyx variegatus along the road from 1900 to 2315. One Urosaurus was seen on the pavement in the dunes at 1905. A juvenile Chionactis occipitalis was seen

Aug. 4

Glamis area, Imperial Co., Calif.
on the road 4 mi. W. of Glamis. One DOR Colemyx variegatus of was collected 12 mi. W. of Glamis. In addition, 9 Colemyx were captured (6 ad ♂, 1 ad ♀, 2 juv.). The minimum temp. tonight was 76°F.

Aug. 5

We arose at 0630 and ate breakfast. We made one pass through from Osborne Park to the Highline Canal, looking for lizards from 0715 to 0940. We saw one juvenile Cnemidophorus tigris, and 2 juv. Dipsosaurus dorsalis. We also saw 4 DOR Phrynosoma m'calli (3 juv & 1 ad ♂). We captured 5 P. m'calli (3 ad, 2 juv.).

As we approached Brawley, we saw thousands of birds in a plowed field that was being irigated. The most numerous birds were black-necked stilts, followed by ring-billed gulls, black terns, and wood ibis. I counted 162 wood ibis feeding on this plot.

We returned to UCR at 1430, after a trip of 434 miles. We had captured 50 lizards of 6 species on the trip, as follows:

Dipsosaurus - 7 (1 ad ♂, 5 im., 1 juv), 4 released (+1 DOR)
Phrynosoma m'calli - 18 (6 ad ♂, 6 ad ♀, 6 juv.), 5 released (+1 DOR)
Uroscaurus - 1 (ad ♀)
Uma notata - 12 (2 ad ♂, 5 ad ♀, 4 im, 1 juv), 6 released

Aug. 5

Glamis area, Imperial Co., Calif.

Coleonyx – 11 (6 ad ♂, 2 ad ♀, 3 juv), 3 released (+1 DOR)

Crot. wisizeni – 1 (juv ♀)

In addition, data were obtained from 4 DOR Callisaurus draconoides. Since 18 were released, & 4 kept animals were young, we brought 28 lizards back to dissect. 3 DOR were kept for reproductive data (1 Coleonyx, 1 Phrynosoma m'calli, 1 Callisaurus).

Aug. 8

Palm Springs, Riverside Co., Calif.

Walt Moberly, Bill Truesdell, Dave Reuther & I left UCR at 0610 for our monthly sample at this site. We looked for lizards from 0720 to 1035. From 0720 to 0830 we looked just north of the last subdivision on Vista Chino Ave. although the small drainage contained as much green Larrea divericata on this side of Vista Chino as it does on the side we explored the last two trips, very few lizards or tracks were seen here. We caught a total of 12 lizards of 4 species here. Then we drove to Palm Springs Panorama. The vegetation (Larrea divericata, Dicoria canescens) was in fine shape. Lizards were somewhat more abundant here, even though the air temperature was getting so high by the time we

Aug. 8 Palm Springs, Riverside Co., Calif.
arrived we didn't expect to see any. We left the area at 1035 (no more lizards were being seen) and returned to UCR. We reached UCR at 1155 after a trip of 114 miles. We caught the following lizards today:
Cnemidophorus tigris - 1 (♂)
Phrynosoma m'calli - 1 (♂)
Uma inornata - 19 (8 ♂, 11 ♀, 1 im ♂) (1 released)
Dipsosaurus dorsalis - 15 (4 ♂, 6 ♀, 2 im ♂, 3 im ♀) (5 released)
Total - 36

Aug. 10 Dale Dry Lake, San Bernardino Co., Calif.
Walt Moberly, Dave Reuther & I left UCR at 0440 for our monthly collecting trip. We looked for lizards from 0700 to 1140. Few were seen while we walked over the area, so we drove slowly down the road. We caught considerably more animals this way than we had earlier in the morning. The area is so dry it is a wonder any animals have survived there. However, we were able to capture 37 lizards this morning, as follows:
Uma scoparia - 26 (9 ♂, 14 ♀, 3 im) (4 released)
Dipsosaurus dorsalis - 7 (2 ♂, 3 ♀, 2 im) (2 released)
Crotaphytus wislizeni - 3 (2 ♂) (1 ♀)
Callisaurus draconoides - 1 (♂)
Total 37

Aug. 10

Glamis area, Imperial Co., Calif.

We then drove to Glamis by way of 29 Palms, Joshua Tree Natl. Mon., Mecca & Brawley.

We began looking for lizards between the canals at 1610. We made one pass thrugh the area (until 1710) without seeing a lizard. apparently it still was too hot for them to come out. We looked for lizards in the dunes from 1720 to 1855 (sundown -1830). We night collected from 1930 to 2100. (1 round trip from Glamis to Highline Canal). Our total catch in the Glamis area today:

Uma notata - 12 (6♂, 4♀, 2 im) (2 released)
Urosaurus graciosa - 12 (5♂, 6♀, 1 im) (1 released)
Colleonyx variegatus - 2 (1♂, 1 im)

Minimum temp. tonight - 80°F.

Aug. 11

We arose at 0545 and ate breakfast. We looked for lizards along the road from 0630 to 1015. However, we didn't capture many lizards. Our catch this morning:

Uma notata - 2 (1♂, 1 im) (1 released)
Crotaphytus wislizeni - 2 (♀)
Diposaurus dorsalis - 1 (im) (1 released)
Phrynosoma m'calli - 6 (1♀, 5 juv) 2 released

3 DOR P. m'calli were seen, 2 of which were good enough to be saved.

Aug. 11

Glamis area, Imperial Co., Calif.

Ike Harris then took us out to Purgatory Flats to see Don Saylor & "Andy" Anderson & their shacks. They are a couple of gold prospectors that have lived in the area for about 30 years.

Then we returned to the dunes and caught the following animals between 1800 and 1845:

Uma notata - 10 (6♂, 1♀, 3 im)(3 released)

Uroscaurus gracioza - 2 (1♂, 1♀)

We looked for Coleonyx along the road from 1950 to 2045 without seeing any. We weren't too surprised, however, because the air temp. when we quit at 2045 was 40.0°C (104°F). We returned to the road at 2225 and looked until 2340. One ♀ Coleonyx was all we found (and one juvenal Crotalus cerastes). Maximum air temp. today was 116°F; minimum temp. tonight was 82°F.

Aug. 12

We arose at 0600 and ate breakfast. Then we looked for lizards along the road from 0640 to 0830. During this time we caught 7 P. m'calli (1♀, 6 juv)(5 released). We simply made one pass as we were leaving the area. We reached UCR at 1145

Aug. 12 Glamis area, Imperial Co., Calif.
after a trip of 569 miles. We caught 94 lizards of 8 species, as follows:
Uma scoparia - 26 (9♂, 14♀, 3 juv) (4 released)
Uma notata - 24 (13♂, 5♀, 6 juv) (6 released)
Dipsosaurus - 8 (2♂, 3♀, 3 juv) (3 released)
Coleonyx - 3 (1♂, 1♀, 1 juv)
Crotaphytus wislizeni - 5 (2♂, 3♀)
Phrynosoma m'calli - 13 (2♀, 11 juv) (7 released)
Callisaurus - 1 (♂)
Urosaurus graciosa - 14 (6♂, 7♀, 1 juv) (1 released)
(21 animals were released)

Aug 17 Hesperia, San Bernardino Co., Calif.
Pete Allen, Howard York, Sue Leisch, & I left UCR at 1810. We reached Hesperia about dark, so simply set up camp for the night. Minimum temp. tonight was 58°F.

Aug. 18 We arose at 0600 and ate breakfast. We looked for Sceloporus magister in the Joshua trees from 0700 to 1000. We caught 8 of them during this period. Then we drove to the rocky hills between Apple Valley & Lucerne Valley to look for Sauromalus obesus. We looked from 1100 to 1200 without seeing a single animal. Then we drove through Lucerne Valley & up Cushenbury Grade to Holcomb Valley.

Aug. 18

Holcomb Valley, San Bernardino Co., Calif.

We reached the yellow pine area at 1400 and began looking for Sceloporus graciosus immediately. We captured 26 of them by the time we quit looking at 1600. Several juvenile S. graciosus were seen but not captured. Then we returned to Lucerne Valley + drove to Pickaninny Buttes to look for S. oberus again.

Pickaninny Buttes, San Bernardino Co., Calif.

We drove around the western side of this range of hills without seeing a single S. oberus. It didn't appear too late in the day - there just didn't seem to be any animals around.

Stoddard Valley, San Bernardino Co., Calif.

We drove on to this valley and camped for the night. The minimum temp. ~~today~~ tonight was 70°F., the maximum temp. we encountered was 102°F.

Aug. 19

We arose at 0630 and ate breakfast. We looked for Callisaurus draconoides + Cnemidophorus tigris from 0730 to 0945. Then we drove the road through the valley that skirts a number of rocky areas. We were looking for S. oberus again, but still saw none.

Aug. 19 Stoddard Valley, San Bernardino Co., Calif.

We quit looking at 1145 and started back to Riverside. We reached UCR at 1405 after a trip of 283 miles. We captured 55 animals of 7 species as follows:

Sceloporus graciosus - 26 (12 ♂, 14 ♀)
Sceloporus magister - 8 (2 ♂, 5 ♀, 1 juv.) (1 released)
Crotaphytus collaris - 3 (2 ♂, 1 juv.) (2 other juv. seen)
Phrynosoma platyrhinos - 1 (♀)
Cnemidophorus tigris - 4 (2 ♂, 2 ♀)
Callisaurus draconoides - 10 (5 ♂, 5 ♀)
Uta stansburiana - 3 (2 ♂, 1 ♀)
Total 55

Aug. 20 Lovejoy Butte area, Los Angeles Co., Calif.

David Reuther + I left UCR at 0615. We looked for Sceloporus magister from 0720 to 1015. Very few of them were seen this morning. We captured 1 adult ♂ and 1 juvenile ♂. Two other juveniles were seen and 4 other adults were seen. We also captured an adult ♀ Crotaphytus wislizeni + a juvenile C. wislizeni (♂). Both juveniles were returned to the lab. for growth data. We looked for Uma scoparia in the small dunes just west of Joshua Tree State Park without success, even though they have been reported here. We reached UCR at 1155 after 181 miles.

Sept. 6

Palm Springs, Riverside Co., Calif.

Dave Reuther + I left UCR at 0610, and reached our collecting site at 0715. We spent most of the morning (until 0945) driving the roads + walking between creosote bushes in Palm Springs Panorama. All the Uma inornata collected today were captured there. The 1 Phrynosoma m'calli caught today was found along Vista Chino Ave. a short distance west of the Panorama entrance. We looked for Dipsosaurus dorsalis, from 0945 until we quit at 1130, in the residential area north of Vista Chino Ave. We captured 23 lizards of 3 species, as follows:

Phrynosoma m'calli - 1 (♀)
Uma inornata - 8 (5 ♂, 3 ♀)
Dipsosaurus dorsalis - 14 (5 ♂, 2 ♀ 3 im, 4 juv.)

The trip covered 116 miles. We reached UCR at 1240. The Dicoria canescens in the Panorama has grown very dense from all the watering that occurs there. New Astragulus sp. plants are beginning to appear. Most of the Larrea divericata is in excellent shape for the same reason. The weather was quite mild all morning. The air temperature (1 meter) when we quit was only 106°F.

Sept. 11

Dale Dry Lake, San Bernardino Co., Calif.

I left UCR at 0550 and reached the collecting site at 0750. I walked and looked for lizards from 0800 to 0910. During this period I saw only 5 lizards (all Uma scoparia). Three of these were juveniles. I caught 2 lizards, one of which was released after it was measured. No tracks of other lizards were seen in this location. I drove along the road, looking for lizards, from 0910 to 1135. a total of 14 lizards (12 Uma scoparia, 1 Dipsosaurus dorsalis & 1 juvenile Crotaphytus wislizeni) were seen during this drive. 3 of the Uma were juveniles. 8 of these lizards were captured (6 Uma scoparia 1 Dipsosaurus dorsalis, 1 Crotaphytus wislizeni). a meadowlark (Sturnella neglecta) was seen sitting in the shade of Hymenoclea salsola at 1020 along the road.

On the return trip to UCR I went through Palm Springs. I looked for lizards along Varner Road from 1410 to 1500. In spite of the extremely arid conditions there, I saw 3 Callisaurus draconoides. I saw no Uma inornata in Palm Springs Panorama, and no Dipsosaurus

Sept. 11 Dale Dry Lake, San Bernardino Co., Calif.
dorsalis along Vista Chino. I looked for Uma from 1515 to 1530, and for Dipsosaurus from 1530 to 1600. I reached UCR at 1700 after a trip of 252 miles.
There were very few tracks at any of these locations to indicate that many animals had been active there recently.

Sept. 14 Glamis, Imperial Co., Calif.
Howard York, Valerie Ernst, Susan Larisch & I left UCR at 1650 for the September collecting trip. We reached the Highline Canal at 2100 and immediately began to look for Coleonyx variegatus along the road. None were seen, however, on the first pass, so we stopped for the night on the big dune at 2130. The minimum temp. tonight was 76°F.

Sept. 15 We arose at 0600 and ate breakfast. Then we drove the road between the two canals, looking for Phrynosoma m'calli, from 0715 to 0940. Three live and 2 DOR's were all that were seen during this period. Lizards were very scarce along the road this morning - we saw only 1 immature Dipsosaurus dorsalis, 2 juvenal Uma notata,

Sept. 15 Glamis, Imperial Co., Calif.

1 adult and about 6 juvenile Callisaurus draconoides besides the aforementioned P. m'calli. We were able to make only one round trip between the canals during this time. By 0940 no lizards could be found anywhere.

We looked for lizards in the dunes from 1625 to 1815 (sundown-1754), and found quite a number of young (juv.) Uma notata, as well as several adult Urosaurus graciosa.

Then we right collected from 1835 to 2105 (1 round trip—Glamis to Highline Canal). We captured 6 Coleonyx variegatus, and two fellows from UCLA caught 2 others. The maximum temp. today was 105°F., the minimum tonight was 78°F.

Sept. 16 We arose at 0635 and ate breakfast. Then we looked for lizards in the dunes from 0750 to 0950. By then all activity had ceased. Lots of Urosaurus graciosa adults (some young) were found, as well as lots of juvenile Uma notata (very few adults seen). We looked for DOR P. m'calli as we left the area (after a quick tour of Purgatory 7 lots). Only 1 juvenile (DOR)

Sept. 16

Glamis, Imperial Co., Calif.

was seen. We reached UCR at 1600 after a trip of 449 miles. We captured a ~~total~~ of 70 lizards (4 species), as follows:

Coleonyx variegatus - 6
Phrynosoma m'calli - 3 (+4 DOR)
Uma notata - 35
Urosaurus graciosa - 26

However, many of these were juvenile lizards, so were simply measured and released. Consequently, only 33 lizards were brought back for dissection for the reproductive investigation, as follows:

Coleonyx - 3
P. m'calli - 2
U. notata - 8
Urosaurus - 20

Urosaurus graciosa appeared to contain the largest adult population in that area at the present time. Lots of juvenile Uma notata were seen, but very few adults. Some Uma were found up in the bushes again this trip. Eriogonum desenticola and Helianthus tephrodes both were in bloom this trip. Eriogonum looked particularly good at this time. Some Croton californica also was in good shape

Sept. 23

Hesperia, San Bernardino Co., Calif.

Dennis Miller, Pete Allen & I left UCR at 0625 to try to get a sample of Sceloporus magister. We reached the collecting area at 0715, and looked for lizards from then to 1000, when we stopped to eat. Only 8 adults were seen; one was caught. Numerous young ones were seen, and 2 were caught for growth data. The weather appeared to be ideal, but most of the adults apparently have already begun hibernation.

Blue Ridge, Los Angeles Co., Calif.

Then we drove up to this location to look for Sceloporus graciosus. Lots of young lizards were running about, but we didn't see a single S. graciosus adult. One adult Sceloporus occidentalis was seen, but it escaped from us. The weather was very nice at this location also. It appeared as though all adult S. graciosus are finished being active this year. We looked for them from 1125 to 1230. Clouds began to build up by then, which cooled off the area. Therefore, we returned to UCR, reaching there at 1345 after a trip of 143 miles.

Dec. 14

UCR, Riverside Co., Calif.

I still have 2 young Crotaphytus wislizeni, 2 young Sceloporus magister, 2 young Sauromalus obesus, 4 young Phrynosoma m'calli, and 1 amphibolurus pictus in cages in the laboratory.

The Phrynosoma m'calli were just returned to the lab. today after a period of 9 1/2 weeks in the vivarium (Oct. 9) where they have been without food. The lights are still off in their cage so they can continue to "hibernate". They had all nearly stopped eating before they were placed in the vivarium. The lights in the cage containing the Crotaphytus wislizeni have been off since because they had stopped eating. Neither the Sceloporus magister nor the amphibolurus pictus eat in any quantity now, even though the lights are still on in that cage for 11 hours each day. The only animals that possess any appetite are the Sauromalus obesus. The thin S. obesus wakes over when flowers are offered, and eats quite a few blossoms. However, it doesn't eat as much as during the summer. The fat one still eats lots of mealworms & some flowers.

Journal

Feb. 20

Palm Springs, Riverside Co., Calif.

Shirley Hill & I left UCR in a thick fog at 0845. We reached the collecting area on Vista Chino Ave. & began looking for lizards at 0955. No animals or tracks were seen for some time. At 1010 we saw the first animal (immature). Nearly ½ hour passed before we saw another. Then lizards became rather numerous:

Time	Number Seen	
1010	1	
1035	1	
1040	1	
1045	2	(Uma inornata)
1050	1	
1055	1	
1100	2	
1105	2	
1110	1	
1115	2	
1120	1	
1123	1	
1125	1	
1130	2	
1140	1	
1145	1	
1155	2	
1210	1	
1220	1	
1225	1	

Journal

Feb. 20

Palm Springs, Riverside Co., Calif.

Time	Number Seen
1230	1
1235	2
1240	2
1245	1
1300	1
1320	1
1330	1
1335	1
1340	1
1350	1
1400	1
1425	2
1430	2
1435	3
1445	3
1515	1

We quit looking for lizards at 1530. Most of the day was spent driving along the roads in Palm Springs Panorama. Vegetation is becoming rather lush there again with all the water they are using to keep the sand from blowing. We saw a total of 50 Uma inornata (we caught 16 of them) and 1 juvenile Dipsosaurus dorsalis. I was surprised to see Dipsosaurus out so early in the season. This is the only one I have ever seen active in February.

Feb. 20

Palm Springs, Riverside Co., Calif.

The air temp (1 meter) varied from 24.4°C (1010) to 28.0°C (1400). We left the area at 1530 and returned to UCR. We reached UCR at 1630 after a trip of 151 miles.

Feb. 22

Dale Dry Lake, San Bernardino Co., Calif.

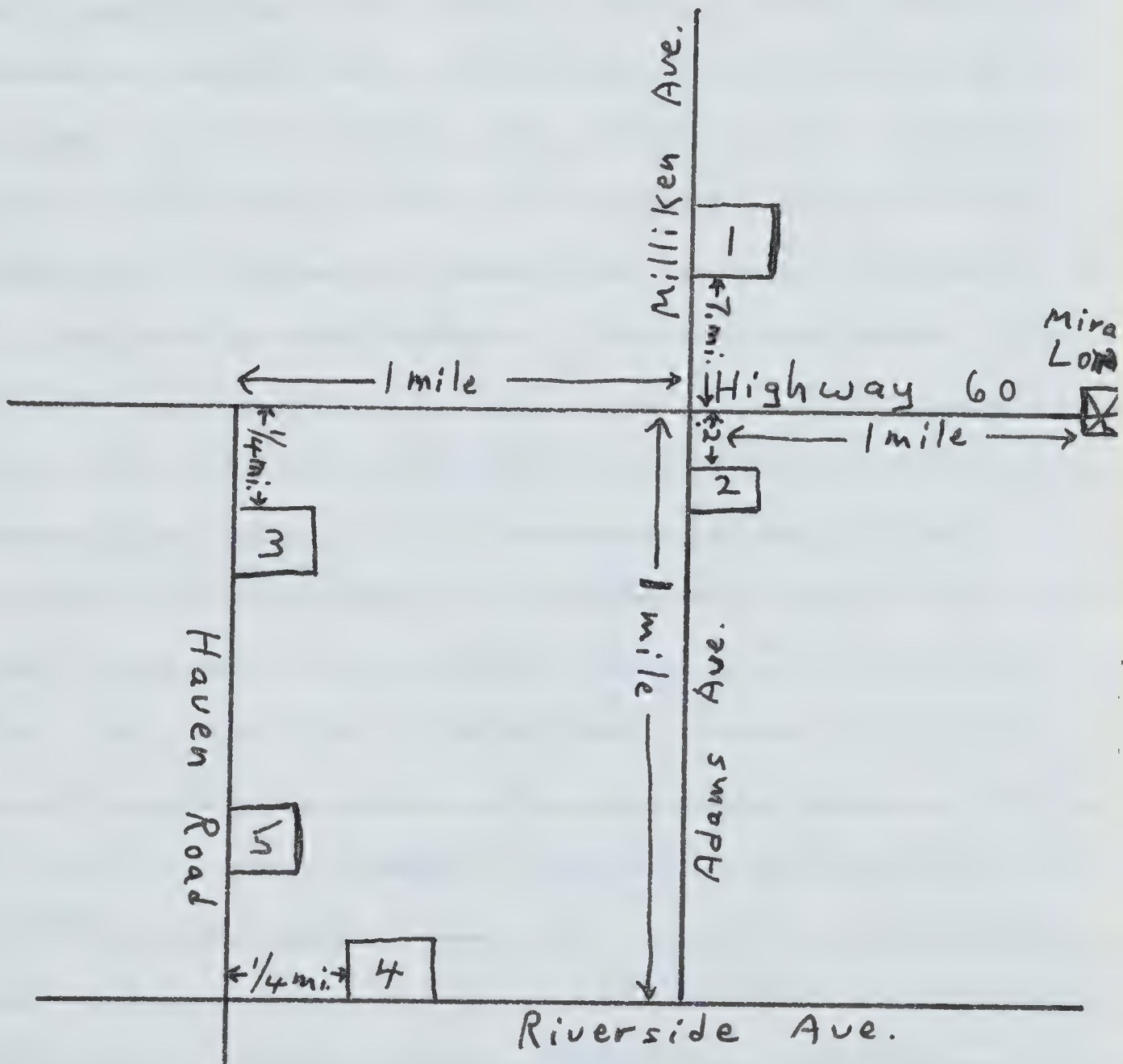
Herbert Brown, Herta Caylor, Susan Larish, Saul Frommer & I left UCR at 0710, and reached Dale at 0920. The wind was blowing sand across the road when we arrived (~15 mph), and continued to blow the rest of the day. We found some Uma scoparia in spite of the wind and rather low temperature. We captured several animals while they were hauled beneath the sand. We looked for animals until 1430, but as we had found none for some time before this, I felt the lizards were through for the day. The soil was wet just beneath the surface down to about 12 inches. Lots of annuals are beginning to emerge. I was pleased to see a number of Hesperocallis through the ground at Dale. We left the area at 1500 and reached UCR at 1800, after a trip of 231 miles.

Mayhew 1963

Mar. 6

Mira Loma area, Riverside Co., Calif.

Today I left UCR at 1130 to try to find some sand dunes that would suitable for a *Uma* spp. transfer experiment. Several were found just west of Mira Loma, across the county line in San Bernardino Co. The following map gives the locations of the 4 dunes I plan to use (#5 was added later):



Mar. 6

Mira Loma area, Riverside Co., Calif.

The corner of Milliken and Highway 60 is approximately 15 miles from the UCR campus. The road is freeway, or at least divided 4-lane, so it requires only about 15 minutes to reach the area. I returned to UCR at 1645 after driving 100 miles.

I plan to release Uma scoparia on dune # 2, U. inornata on dune # 4 + U. notata on dune #3. All three species will be released on dune #1. Dunes 3 + 4 have a series of dunes lying between, so I want to see if either of these species will spread to the original location of the other. Am curious to see what will happen if they do come together under these circumstances. All animals will be marked (toe-clipped) + released at a given point in each dune. Then the rate of spread through the habitat can be determined by recapture. Dune #1 will be used to see if competition of these species in a given location will eliminate any. The other dunes will have only one species present, which will be used primarily as a check to be sure the species can survive under these rather artificial (for them) conditions.

Mar. 13

Palm Springs, Riverside Co., Calif.

Herta Caylor, Shirley Hill & I left UCR at 0820 and spent most of the day looking for Uma inornata in Palm Springs Panorama. Between 0915 and 1700 we saw a total of 85 Uma inornata. We were able to capture 16 of them. In addition, we saw one Crotalus cerastes, which we left in the Larrea in which we found it, and 4 Dipsosaurus dorsalis. The weather was perfect all day. Lots of Uma were seen in the Panorama, but very few were seen in the typical desert areas around this site. Almost no evidence of Uma was seen in the short while we spent at "Granddaddy Dune" — few animals or tracks. We reached UCR at 1800 after driving 151 miles.

A group of Dipsosaurus dorsalis that had been used in an experiment were released in the Panorama. They were placed beside Larrea on Tackevah Drive just south of the eastern-most large sign on that street — about 1½ blocks from the eastern boundary of the development. About 15 middle-sized immature animals were involved. There appeared to be enough food in this vicinity to meet their needs.

Mayhew
1963

Journal

Mar. 15

Glamis area, Imperial Co., Calif.

Kenneth Evans, Herbert Brown and I left UCR at 1730. We reached the Highline Canal at 2030 and immediately began night collecting. However, no animals were seen by 21 20 (16 miles), so we quit for the night. The air temperature was quite low (approx. 15°C) during this period.

Mar. 16

We arose at 0745 and ate breakfast. We reached the Coachella Canal at 0855 and began looking for *Phrynosoma m'calli* to no avail. We found 2 DOR, but no live animals. We looked until 1345 without success. The air was cool & the sky was 100% overcast much of the time, so I wasn't surprised we didn't see any lizards. after lunch we looked for *Uma notata* & *Urosaurus graciosa* in the dunes. Quite a few *Urosaurus* were found, but not many *Uma* were seen. We quit looking at 1745. after we ate, we made one pass through the area, looking for *Coleonyx*. However, the cloud cover, cool temp. & slight breeze still persisted, so we didn't find any. It appeared as though it would rain during the night, so we headed back for

Mar. 16

Glamisarea, Imperial Co., Calif.

UCR at 1910, arriving at 2215. It rained on us steadily from Cabezon on to Riverside. It was raining so hard in Riverside we didn't unpack the carry-all. The total trip covered 418 miles.

Mar. 20

Dale Dry Lake, San Bernardino Co., Calif.

Shirley Hill & I left UCR at 0705, & reached the collecting area at 0900. We did most of our collecting from the car. We saw relatively few lizards while walking, so we returned to driving along the road. Only Uma scoparia were seen today — no other reptiles appear to be active yet. We captured 34 Uma & saw 6 others between 0900 and 1600. All Uma activity apparently had ceased by 1505, since we saw none after that time. We released Sauromalus obesus #3 at Indian Cove on the way home. We reached UCR at 1900 after driving 230 miles.

Mar. 22

Mira Loma, Riverside Co., Calif.

This morning I released 55 Uma of 3 species on dunes 2, 3 & 4 (33 U. scoparia on #2; 7 U. notata on #3; 15 U. inornata on #4). Dune #2 is in Riverside Co. at the San Bernardino — Riverside county boundary. Dunes 3 & 4

Mayhew
1963

Mar. 22

Mira Loma, Riverside Co., Calif.

are just across the line in San Bernardino Co. Dune #1 occurs almost on the county line like #2. There seems to be an awful lot of traffic on the roads past dunes # 1, 2, and 4, but very little past #3.

April 5

Gran Desierto Trip, Sonora, Mexico

Pete Allen, Herb Brown, Dennis Miller & I left UCR at 1120 to collect as many Phrynosoma m'calli as we could find for an experiment I want to set up. We drove first to the Algodones Dunes west of Glamis. We reached the Highline Canal at 1445 and made one rapid pass between the canals. We saw 3 DOR P. m'calli, but no live ones. The only live lizards we saw on that stretch of road were 3 Callisaurus draconoides. We began walking in the dunes at 1515, looking for Uma notata & Urosaurus graciosus. Between then and 1735 we captured 3 Urosaurus (only ones we saw) and 34 Uma. Then we drove into Arizona & camped about 2 miles north of the Mexican border at San Luis. We drove 266 miles today.

April 6

We arose at 0715 and ate breakfast. We crossed the border at San Luis

April 6

Gran Desierto Trip, Sonora, Mexico

at 0900. We looked for Phrynosoma m'calli for the first 10 miles. Only 1 live one was seen. Lots of immature Dipsosaurus dorsalis were seen all along the road, as well as a few Callisaurus draconoides & Uma notata. By noon it was getting too warm for P. m'calli, so we drove east of San Luis about 90 miles to see what the country was like, & to see if there was additional suitable habitat for P. m'calli. No better habitat was found, so we returned to San Luis. We crossed the U.S.-Mexican border at 1800. Then we drove to the Ogilby Road & camped for the night. We drove 245 miles today.

April 7

Glamis area, Imperial Co., Calif.

We awoke at 0800 because the sky was completely overcast. I drove down Highway 80 to get some pictures of the dunes in that area, then returned to our campsite to pick up the others. Then we drove to Glamis by way of the Ogilby Road. We began to look for Phrynosoma m'calli between the canals at 1045, and continued looking until 1730 (sunset—1800). We found 11 live & 6 DOR P. m'calli during that period.

April 7

Glamis area, Imperial Co., Calif.

The sky remained overcast until 1530, when more blue sky began to emerge. Four of the animals were found by tracking during the late afternoon.

At 1945 we began night collecting. We made one round trip between the canals (14 miles) by 2055. We caught 6 Coleonyx variegatus & found 1 DOR. One Crotalus cerastes had just been run over before we reached it. No other animals were seen (except one Lepus calif.). We drove 95 miles today.

April 8

We arose at 0545 and ate breakfast. We looked for Phrynosoma m'calli between the canals from 0640 to 1110 without seeing a live one. The temp. didn't warm up enough until 0800 or 0830, but by that time the wind was blowing about 10-15 mph. Apparently that is enough wind to keep them under the sand, because we saw no signs of them or their tracks on the sand. We slept under the bridge across the Coachella Canal during the early afternoon, hoping the wind would die down enough for P. m'calli to come out. As the wind velocity didn't diminish, we went into the dunes at 1600 to

April 8

Glamis area, Imperial Co., Calif.
look for Uma notata & Urosaurus graciosus. We looked for them until 1730. Not many Uma were seen (only half a dozen), but we were able to catch 9 Urosaurus during this period. In this wind, they tended to stay down in the denser portions of the vegetation, but they were above the ground. No Dipsosaurus dorsalis or Callisaurus draconoides were seen today, presumably because of the wind. The air temp. was in the high 80's or low 90's (F).

We began to night collect at 1845. We made a complete trip from the Highline Canal to Glamis & back (28 mi.). We collected 1 Chionactis occipitalis, 1 young Phyllodactylus decumatus, and 9 Coleonyx variegatus, in spite of the fairly strong wind & almost 100% overcast. We stopped at 2100. We drove 70 miles today.

April 9

We arose at 0700 and ate breakfast. The wind was still blowing & the sky was completely overcast, so we headed for home at 0800. We returned home by way of Highway 78 & Warners Hot Springs. We drove 189 miles today, & a total of 865 miles on the entire trip. We reached UCR at 1440.

April 9

Glamis area, Imperial Co., Calif.

We captured the following lizards on this trip:
Uma notata - 46
Phrynosoma m'calli - 12
Callisaurus draconoides - 1 Total = 98
Coleonyx variegatus - 15
Urosaurus graciosus - 14
Dipsosaurus dorsalis - 10

April 11

Palm Springs, Riverside Co., Calif.

Ron Oshima & I left UCR at 0850 to collect Uma. We reached Palm Springs at 1000 & immediately began to look for lizards. We continued to look until 1645. During this period we caught 2 Dipsosaurus dorsalis (only saw one others), 1 Phrynosoma m'calli, & 20 Uma inornata. All but the Dipsosaurus were caught in Palm Springs Panorama. The weather today was ideal: no clouds or wind, max. air temps. about 29°C. Few Uma were seen in the morning, & those that were seen were spooky as the dickens. We finally caught the first Uma at 1135. A total of 75 Uma were seen today, nearly all of which were seen in the Panorama. As we were leaving Palm Springs, we saw a sign on some property on Indian Ave. that offered to sell the land - 200 ft. x 370 ft. (74,000 ft^2) (~1 1/2 acres) for $95,000!!! We had to drive back to get a better look at the sign — we couldn't

April 11 Palm Springs, Riverside Co., Calif.

believe our eyes the first time. This amounts to approximately 1½ acres of land. Saw a shrike nest with 5 young in it.

After leaving Palm Springs, we drove to Indian Cove, where we camped for the night. We drove 173 miles today.

April 12 Dale Dry Lake, San Bernardino Co., Calif.

We arose at 0600 & ate breakfast. Then we drove to our collecting site at Dale Lake. We began looking for lizards at 0700. We looked along the road until about 1100 without success. We walked around in the sand a bit during this period, but found only 2 Uma scoparia. We then walked over a considerable acreage, looking for lizards, but without too much success at first. Then we began to see more Dipsosaurus dorsalis than Uma. The sky began to get slightly overcast about noon, & continued to become more cloudy as the afternoon progressed. A slight SE breeze also began to blow about the same time. The maximum air temp. (1m) recorded today was 29.0°C. Dipsosaurus disappeared from the surface about 1345 because the wind began cooling the environment. Many of the Uma,

April 12

Dale Lake, San Bernardino Co., Calif.

however, were captured after this time. They were not seen on the surface after 1525, though. We looked for lizards from 0700 to 1600. During this period we captured 20 Uma scoparia and 11 Dipsosaurus dorsalis. These were the only kinds of lizards seen today. (One Crotalus cerastes was seen at the entrance to a hole beneath Larrea divericata at 1315.) In addition to the captured animals, we saw 4 Uma scoparia & 3 Dipsosaurus dorsalis. There were relatively few tracks visible in most of the places we looked, indicating not many lizards are still in the area, or at least aren't active yet. However, the weather today was almost ideal until about 1430. Lots of annuals have germinated this spring, but most of them are blooming while they are still rather small. For example, most of the Oenothera deltoides are blooming while they are less than 4 inches high. Lots of Aphonia wilcoxa has bloomed, but usually only 1 blossom per plant. A great deal of Dicoria canescens is up, but not blooming yet. Some Palafoxia linearis is present

April 12 Dale Lake, San Bernardino Co., Calif.

and blooming. I don't know why we didn't see more reptiles. There were many more to be seen last month than this month. We returned to UCR at 1845 after driving 156 miles today, + 329 miles for the entire trip.

We captured the following animals during the entire trip:

Uma inornata – 20
Phrynosoma m'calli – 1
Dipsosaurus dorsalis – 13
Uma scoparia – 20
Total = 54

April 16 Mira Loma area, Riverside Co., Calif.

Between 1230 & 1300 today I released an additional 87 Uma spp. on 4 dunes. This makes a total of 142 Uma released now on 5 different dunes. (U. scoparia have been released on dunes #1, 2, & 5.). The weather was slightly overcast, & the air temp. was rather cool. The rain Sunday has packed the sand pretty well, so these lizards were not able to bury very well yet. Dune #5, which I used for the first time today, is about 1/4 mi. north of Riverside Ave. on Haven ave. This is over 1/4 mi. NW of Dune #4, & approximately 1/2 mi.

April 16

Mira Loma Area, Riverside Co., Calif.

south of Dune #3. The lizards released at Dune #5 were turned loose beside a power pole near the south end of the dune. The lizards at Dune #1 were released by a power pole at the NW corner of the dune.

April 19-21

Glamis area, Imperial Co., Calif.

(left UCR at 1250)

Bob Glaser & I took the field zoology class to the Colorado Desert this week-end. There were 22 of us in all (3 International Travelalls & 1 1½ ton truck). Sand was really moving by the time we reached Palm Springs (winds about 25 mph). One of the Travelalls got sand between the points, so it stopped running near the Palm Springs cemetery. About an hour was lost in finding & correcting the trouble. We reached the Glamis area by sun-down, but the wind was blowing so hard and it was so cold, we found very few animals on the road that night.

The class was divided between the dunes & the creosote bush scrub during the morning (0800 to 1130), then the groups were changed in the afternoon (1400 to 1600). Bob had the

April 19-21 Glamis area, Imperial Co., Calif.

creosote group, I had the dune group. The wind blew constantly, so very few animals were seen. To top things off, Bob got one Travelall stuck at the edge of the road, which cost us about an hour. Then Tony Roth lost the keys to one of the Travelalls in the dunes. We had to "hot wire" it to get it back. Luckily, he had forgotten to lock the vehicle before we went out into the dunes. Night collecting was just as bad as on the previous night. Sunday morning the wind was still blowing, so we headed for home. We arrived at UCR at 1630 after a total trip of 506 miles.

The only animals captured were as follows:

Chionactis occipitalis - 1
Dipsodomys deserti - 1
Uta stansburiana - 1
Coleonyx variegatus - 4
Callisaurus draconoides - 2
Dipsosaurus dorsalis - 3
Uma notata - 37
Urosaurus graciosus - 27
Total = 76

We also saw 4 Crotalus cerastes while in the area.

April 24 | San Jacinto MTs., Riverside Co., Calif.

Eric (Ted) Pengelley, Valerie Ernst, Herta Taylor, Shirley Hill, Dennis Miller & I went after a sample of Sceloporus graciosus. We left UCR at 1010. We looked for lizards on and near our lots at Pine Cove. Two adults (♂♀) + several young were caught there. Then we drove 2 miles north to the entrance road to Fern Basin campground. Here we caught a number of S. graciosus as well as 3 S. occidentalis and 1 Uta stansburiana. Patches of snow were still on the ground at both sites. The air temp. maximum today at these locations was 14.0°C. There was no wind + no clouds. For some reason, no adult females were seen today, + only 5 young females were caught. In addition, 15 adult males + 9 young males were captured (S. graciosus). Also, 3 adult male S. occidentalis and 1 adult ♀ Uta stansburiana were caught. In all, 34 lizards of 3 species were captured between 1230 and 1600. Winter is still in the air in this locality, so lizards aren't nearly as plentiful as they will be later. We returned to UCR at 1720 after a trip of 109 miles.

April 28 Glamis area, Imperial Co., Calif.

Ken Evans & I left UCR at 0910 for Coleonyx variegatus and Phrynosoma m'calli. We reached the Highline Canal at 1220 and immediately began driving the road between the canals, looking for P. m'calli. We continued to look until 1730. During this period we captured 3 near the road and dug 1 out after tracking it. We also caught 1 Dipsosaurus dorsalis, 1 Uta stansburiana, and 1 Uma notata. We also found 5 DOR P. m'calli.

We night collected for Coleonyx from 1915 to 2245. During this period we collected 19 in excellent shape, 3 that were alive but injured by cars, & 1 DOR that was in fine shape. At least another dozen DOR's were seen, but were damaged beyond saving. The weather all day and evening was ideal — no trace of wind or clouds, with a maximum daytime temperature of 30.0°C. We drove a total of 49 miles while night collecting, 218 miles for the entire day. We spent the night in the creosote bush scrub, 1 mile west of the Coachella Canal.

April 29

Glamis area, Imperial Co., Calif.

We arose at 0700 and ate breakfast. Then we began driving the road, looking for P. m'calli, at 0740. We continued this until 1220. During this period, we caught 9 P. m'calli and saw 8 DOR m'calli. We also caught 2 Dipsosaurus dorsalis. One Cnemidophorus tigris and 4 Callisaurus draconoides were the only other reptiles seen today. I don't know why more aren't present between the canals. The weather was a repeat of yesterday, so the lizards should have been active, if any are still there. P. m'calli still seems to be the most abundant lizard between the canals — at least, of those that don't reside in the creosote bushes (i.e. Urosaurus graciosus). We reached UCR at 1600 after driving 172 miles today, and 390 miles on the entire trip. We caught the following animals:

Coleonyx variegatus - 22 (10♀, 12♂) (+1 DOR ♀)
Phrynosoma m'calli - 13 (3♀, 10♂) (+1 DOR ♂)
Dipsosaurus dorsalis - 3 (2♀, 1 im ♂)
Uma notata - 1 (♂)
Uta stansburiana - 1 (♀)
Total = 40 (+2 DOR)

May 3

Mojave Desert, San Bernardino Co., Calif.

I left UCR at 1300 with the field zoology class for the high desert trip. We spent most of the afternoon looking for animals in the Joshua tree woodland habitat in Hesperia. Then we drove to our campsite at Stoddard Valley before sunset. Bob Glaser took one carload of students for night collecting, but they were unsuccessful in locating any reptiles.

May 4

after breakfast we spread out over the alluvial fan, looking for any sort of reptile, but especially for Gopherus agassizi. Only 3 live Gopherus were seen this year, compared to 17 last year. Lots of skeletons (about 12) were found this year, however, indicating the long drought is producing more casualties among the tortoises, as well as the other reptiles. We looked for Sauromalus obesus and Crotaphytus collaris on the rocky slopes during the afternoon. Only 2 Sauromalus and no Crotaphytus were seen. Then we drove to the Pisgah lava flow east

May 4 Mojave Desert, San Bernardino Co., Calif.

of Barstow to look for reptiles. We found 3 more Sauromalus, as well as 2 Cnemidophorus tigris and 1 Phrynosoma platyrhinos. Then we drove to Amboy, followed by a drive to Dale Dry Lake, where we camped for the night. The night collectors saw only 4 Crotalus cerastes.

May 5 We worked in the sandy creosote bush scrub this morning. Lots of Uma scoparia were found about a mile west of the Iron Age Mine Road. We returned to UCR at 1445 after a total trip of 342 miles. The animals we brought back were:

Uma scoparia	49
Callisaurus draconoides	16 (3 immature)
Phrynosoma platyrhinos	5
Cnemidophorus tigris	16
Crotaphytus wislizeni	4 (1 immature)
Uta stansburiana	8
Xantusia vigilis	13
Sceloporus magister	4 (all immature)
Coleonyx variegatus	1
Dipsosaurus dorsalis	18
Sauromalus obesus	5
Total	139

(11 species)

May 20

Blue Ridge, Los Angeles Co., Calif.

Shirley Hill & I left UCR at 0925 to get a sample of Scaloporus graciosus for the reproductive cycle investigation. We collected lizards from 1030 to 1345. During this period we captured 1 Uta stansburiana, 3 Scaloporus occidentalis and 21 S. graciosus. We returned to UCR at 1500 after a trip of 107 miles.

May 24

Glamis area, Imperial Co., Calif.

Herta Caylor, Shirley Hill & I left UCR at 1250 to collect Phrynosoma m'calli. We reached the Highline Canal at 1550 and made one pass between the canals before going into the dunes to catch Uma notata. One live and 6 DOR Phrynosoma m'calli were seen on that pass. The wind was blowing sand in the dunes, so we were able to catch few of the Uma we saw, and we didn't see many. We night collected from 1920 to 2300 (miles), and saw 5 Chionactis occipitalis, 1 Crotalus cerastes as well as numerous Coleonyx variegatus. We collected only Coleonyx. We also found an immature of Phrynosoma m'calli on the road at 2125, as we had collected past that point

May 24 | Glamis area, Imperial Co., Calif.

several times, I am quite certain the animal had just recently gotten onto the road. We drove 55 miles between 1920 and 2300 night collecting.

May 25 | We drove between the canals, looking for P. m'calli from 0700 to 1230 and again from 1500 to 1845. During this period, we collected 27 P. m'calli. We also captured a few lizards of other species that we found beside the road during this interval. In addition, 9 DOR P. m'calli were seen. We night collected from 1940 to 2010, then again from 0105 to 0125. No animals were seen during the second period, but half a dozen Coleonyx variegatus and 1 Chionactis occipitalis were collected during the first period.

May 26 | We looked for Uma notata in the dunes from 0700 to 0820, during which we captured 19. Then we looked for P. m'calli between the canals from 0840 to 1200. We captured 10 live ones and saw 2 DOR's. We left for home at 1200, and reached UCR at 1600. The entire

May 26

Glamis area, Imperial Co., Calif.

trip covered 512 miles. The following animals were returned to UCR:

Uma notata - 29
Phrynosoma m'calli - 39 (+7 DOR)
Callisaurus dorsalis - 1
Coleonyx variegatus - 19
Cnemidophorus wisligeni - 2
Uta stansburiana - 2
Urosaurus graciosus - 4
(7 species) Total 96

We also saw 7 Chionactis occipitalis (1 was DOR) and 1 Crotalus cerastes on the trip.

June 5

Barton Flats, San Bernardino Co., Calif.

Dave Reuther, Shirley Hill, Herta Caylor & I left UCR at 0745 for a sample of Sceloporus graciosus. We looked for lizards at South Fork Campground from 0905 to 1120. During that period we captured 25 adult S. graciosus that we kept, and 7 immatures that we measured and released. We also captured 4 adult and 4 immature S. occidentalis during the same period. The weather was quite cool all the time we were in the mountains. The maximum temp. (air) I recorded today was 17.0°C (at 1320). We reached UCR at 1430 after a trip of 145 miles

June 7

Glamis area, Imperial Co., Calif.

Valerie Ernst, Shirley Hill, David Reuther & I left UCR at 0625. We collected Uma inornata in Palm Springs Panorama from 0720 to 1120 on our way to Glamis. We captured 24 Uma and 1 Phrynosoma m'calli at this site. We reached the Highline Canal at 1345 and immediately began to look for P. m'calli along the road. The air temp. (1 meter) at this time was only 30.0°C. We looked for P. m'calli on one pass between the canals (from 1345 to 1545). We captured 9 live P. m'calli and saw 3 DOR's. Then we looked for Uma notata in the dunes from 1600 to 1815. We captured 40 of them and 3 Crotaphytus gracilosus. We night collected on the road between Glamis and the Highline Canal from 2000 to 2205 (26 miles). We collected 8 Coleonyx variegatus during this period.

June 8

We looked for P. m'calli between the canals from 0730 to 1130, and from 1245 to 1805. We collected 27 live ones & found 2 DOR's that had been killed today and 2 that had been dead for some time. We drove out to the end of the new pavement east of Glamis this evening. An additional

June 8

Glamis area, Imperial Co., Calif.

16 miles of pavement, that begins at the junction of the Glamis Road & the Blythe-Ogilby Road, has just been opened toward Blythe. The last 16 miles of dirt road is now being paved. We right collected all the way back to our campsite 8 miles west of Glamis, but found only 1 Coleonyx variegatus and 1 Hypsiglena torquata.

June 9

We looked for P. m'calli between the canals from 0715 to 1045. We captured 9 live ones and saw 3 new DOR's. We returned to UCR at 1505 after a total trip of 500 miles. We captured the following animals on the trip: Uma inornata - 24

U. notata - 40

Phrynosoma m'calli - 46

Urosaurus graciosus - 3

Crotaphytus wislizeni - 3

Coleonyx variegatus - 9

Hypsiglena torquata - 1

Total - 126

We also saw 4 Crotalus cerastes.

June 11

Mojave Desert, San Bernardino Co., Calif.

David Reuther, Shirley Hill, James Allen & I left UCR at 0610. We collected Uma scoparia along the road near

June 11

Mojave Desert, San Bernardino Co., Calif.
Dale Dry Lake, then collected west [redacted] of Rice. During the afternoon we looked for U. scoparia in the dunes 3 mi. N.W. of Chubbuck. We caught 10 U. scoparia near Dale, 19 near Rice, and 3 near Chubbuck. We camped for the night at Kaiser's old Vulcan Mine in the Providence Mts. We caught 1 Chiracis at Kelso.

June 12

This morning we captured 8 U. scoparia in the Kelso Dunes and 2 more in the dunes along the Mojave River 2 miles west of Lenwood. In all, 42 Uma scoparia were captured this trip, as well as 4 Dipsosaurus dorsalis, 4 Phrynosoma platyrhinos, 1 Cnemidophorus tigris and 1 Chiracis occipitalis. We returned to UCR at 1650 after a total trip of 509 miles. The weather was extremely mild for this time of year on both the Glamis and the Mojave [redacted] Desert trips. The temperature was never over 32°C the entire time.

July 11

Palm Springs, Riverside Co., Calif.
Dave Reuther, Shirley Hill & I left UCR at 0505 to collect some Uma inornata for release in the Mira Loma dunes. We drove the roads

July 11

Palm Springs, Riverside Co., Calif.
in Palm Springs Panorama from 0600 to 1130. By 1130 the air temp. (1 meter) was 38.0°C. During this period we captured 37 Uma inornata and saw many others. We also saw 2 Dipsosaurus dorsalis. The animals captured were:

17 adult ♂
14 " ♀
5 immature ♂
1 " ♀

We returned to UCR at 1305 after a trip of 114 miles. Then we took these animals and some other Uma spp. and released them in the Mira Loma dunes. We now have the following lizards released in 5 dunes:

Dune #1: U. inornata - 55
U. notata - 55
U. scoparia - 55
Dune #2: U. scoparia - 33
Dune #3: U. notata - 112
Dune #4: U. inornata - 86
Dune #5: U. scoparia - 52

Total
U. inornata - 145
U. notata - 167
U. scoparia - 140
Grand Total - 452

July 15

San Bernardino Mts., San Bernardino Co., Calif.

Dave Reuther, Shirley Hill & I left UCR at 0715 to collect a sample of Sceloporus graciosus from this range in July. We looked for lizards in the Barton Flats area from 0830 to 1300. During this period we caught 19 Sceloporus graciosus and 2 Sceloporus occidentalis. The S. graciosus were very wary today — much more so than I have usually seen them at this location. Several sub-adults were captured today, but no real immature lizards were seen. We returned to UCR at 1420 after a trip of 110 miles.

July 16

San Jacinto Mts., Riverside Co., Calif.

Dave Reuther, Shirley Hill, Bobby Mayhew & I left UCR at 0720 to collect Sceloporus graciosus. We collected on and near our lots at Pine Cove. We collected between 0840 and 1215. During this period we caught 25 animals — 24 Sceloporus graciosus (11♂, 13♀) and 1 (♂) Sceloporus occidentalis. These animals were as "spooky" as those we had cleared in the San Bernardino Mts. the day before. Many were seen that we were unable to catch. We returned to UCR at 1330 after a trip of 103 miles.

July 18 — San Gabriel Mts., Los Angeles Co., Calif.

Dave Reuther, Shirley Hill & I left UCR at 0740 to obtain some Sceloporus graciosus. We looked for lizards from 0830 to 1200. During this period we captured 36 Sceloporus graciosus (11 ad ♂, 16 ad ♀, 9 immature ♂), (Four immature ♂ were released), 5 Sceloporus occidentalis (2 ad ♂, 3 ad ♀), and 2 Uta stansburiana (1 ad ♂, 1 ad ♀), for a total of 43 lizards. We returned to UCR at 1340 after a trip of 106 miles.

Aug. 11 — Pine Cove, Riverside Co., Calif.

I looked for Sceloporus graciosus on and near our lots from 0945 to 1200. During that period I captured 19 S. graciosus and 1 S. occidentalis. Only 14 S. graciosus were kept for the reproductive study (8♂, 6♀). The remaining 5 lizards (young) were measured and released.

Aug. 13 — Blue Ridge, Los Angeles Co., Calif.

Shirley Hill, Dave Reuther & I left UCR at 0730 for a monthly sample of Sceloporus graciosus from this area. We collected here from 0830 to 1005. During this period we captured 25 lizards, as follows: Sceloporus graciosus - 19
" occidentalis - 5
Uta stansburiana - 1

Aug. 13 | Barton Flats, San Bernardino Co., Calif.

Then we drove immediately to the Barton Flat area for a sample from the San Bernardino Mts. We looked for lizards at this site from 1215 to 1245, then ate lunch. After lunch we collected from 1450 to 1545. In all, we caught 28 lizards at this site:

Sceloporus graciosus - 25
" occidentalis - 3

We captured 53 lizards during the day, as follows:

Uta stansburiana - 1
Sceloporus graciosus - 44
" occidentalis - 8

We reached UCR at 1710 after a trip of 192 miles.

Aug. 20 | Glamis area, Imperial Co., Calif.

at 1420 Lyn Rath, a graduate student at San Diego State phoned to tell me a thunderstorm had occurred Friday (Aug. 16) east of the Chocolate Mts., & she had found toads & tadpoles in some of the pools. By 1600 Dave Reuther, Shirley Hill & I left UCR, followed shortly by Lon McClanahan and Valerie Ernst. We reached Glamis at 2000, met Lyn Rath at Ike Harris' house, then proceeded to the pools (16.3

Aug. 20

Glamis area, Imperial Co., Calif.

miles N.E. of Glamis; 5.3 mi. N. of the intersection of the new paved road with the old Blythe – Ogilby road). Most of the pools had dried up by the time we reached the area, even though Lyn said the washes were full to the tops of their banks on Friday night. Nevertheless, we found one small pool that contained two types of tadpoles in it. No adult amphibians were seen until 2215, when we began to find both Scaphiopus couchi and Bufo punctatus on the muddy areas left by the evaporating water. They apparently were coming out to feed. None of them called at all. We captured 5 Scaphiopus couchi (3 ♂, 2 ♀) and 4 Bufo punctatus. We also collected a number of tadpoles from the pool, which we shall try to raise in the laboratory. We collected toads (and saw 1 Crotalus atrox) until 2300, then drove to Kefina (16 mi. N. of Glamis on the Glamis – Niland road), where Harris said there had been some large pools there. The pools were still standing when we arrived,

Aug. 20 | Glamis area, Imperial Co., Calif.

but we could find no trace of adult amphibians or tadpoles. Consequently, we camped there for the remainder of the night (2 miles N. of Amos).

Aug. 21 | We looked the pools over carefully in daylight, but still could find no trace of amphibians. A number of diving beetles were in the pools, but we found little else. One pool at Regina and 1 at Amos were still quite large (about 100 ft. long yet), but no evidence of amphibians could be seen. Apparently these animals are not distributed much north of Glamis. However, the vegetation from Amos north is quite sparse, and probably would not give amphibians the protection they need the remainder of the year.

We returned to the large wash east of the Chocolate Mts. we had investigated the night before. We released 2 S. couchi out on the open bed of the wash to see what they would do. Both sat motionless for several minutes, then they hopped to the shade at the bank of the wash. One dug in in the shade of an ironwood tree (Olneya tesota)

Aug. 21 | Glamis area, Imperial Co., Calif.

in mud, the other dug in in a sandy spot in the shade of the bank. Both spots were still quite moist. They were allowed 2 hours in which to get located, then they were dug out. The one in mud was approximately 4 inches beneath the surface. It had made a chamber lateral to its point of entrance. The second animal had simply dug down approximately 2 1/2 inches beneath the sand surface. It had made no attempt to form a chamber.

The wash in which these amphibians were found was rather thickly covered with vegetation (at least, the banks were). Ironwood and palo verde (Cercidium floridum) were the dominant plants. These plants provided considerable shade, so amphibians could survive quite nicely dug in beneath them. Vegetation was quite sparse a short distance from the banks of the wash, however. It appeared these animals would be restricted to the washes, and would be unable to travel any distance over the intervening terrain.

During the afternoon we made

Aug. 21

Glamis area, Imperial Co., Calif.

one pass between the canals, looking for Phrynosoma m'calli. We caught 4 of them at this time.

Aug. 22

We arose at 0600 after a rather miserable night. The mosquitoes about carried us away. We camped in the creosote bush scrub 8 miles west of Glamis where we have camped many times before. Never have I seen so many mosquitoes, however. In fact, I've encountered mosquitoes here only once before in 5 years. We looked for P. m'calli from 0700 to 0930. We had to dodge many gravel trucks during this period. We caught 4 P. m'calli + saw one DOR. We returned to UCR at 1540 after a trip of 560 miles.

Sept. 4

Lon McLanahan + I left UCR at 1400 because a widespread rain storm threatened to wreak precipitation near Glamis. Although rain fell from Los Angeles to Brawley, no rain fell at Glamis. We drove further east, hoping to find spots where it had rained in Scaphiopus couchi habitat, but we were unsuccessful. We spent the night camped at Milpitas Wash, 12 mi. south of Palo Verde.

Sept. 5

Glamis area, Imperial Co., Calif.

This morning we checked out a number of washes between Milpitas Wash and Glamis. Milpitas Wash is about ½ mile wide where the road crosses it. Many palo verde and ironwood trees, as well as numerous smoke trees grow in the wash. There is much suitable habitat for S. couchi in this wash. Many tributaries flow into this wash, most of which also contain considerable suitable habitat for S. couchi. Then we checked the terrain near the Southern Pacific Railroad tracks from East Clyde to Niland for S. couchi habitat. We returned to UCR at 2000 after a trip of 433 miles.

Sept. 7

Snow Valley, San Bernardino Co., Calif.

Bobby, Bruce & I spent most of the day looking for Scelaporus graciosus at this location (7000 ft.). In all, we captured 42 of them today. all of these were measured & their temperatures recorded. all but 15 of them (11♂, 4♀) were then released. Most of the released ones were immature.

Sept. 8

The three of us spent about an hour looking this morning, but we caught only 3.

Sept. 10 | San Gabriel Mts., Los Angeles Co., Calif.

I left UCR at 1200 to get a sample of Sceloporus graciosus for this month from these mountains. I collected in the usual location at Blue Ridge. I looked for lizards from 1320 to 1520. Lizards were conspicuous by their absence this afternoon. They were not nearly as numerous today as they were in the San Bernardino Mts. last Saturday (Sept. 7) afternoon. For example, on Sept. 7 I caught 21 lizards during this same time period, and saw at least that many more I was unable to capture. Today, however, I captured only 7, and saw only about 10 other adults. In addition about 6 juveniles were seen today. I returned to UCR at 1610 after a trip of 106 miles.

Sept. 17 | Glamis area, Imperial Co., Calif.

Jon McClanahan, Valerie Ernst & I left UCR at 2145 in response to a phone call from Glamis that it had started to rain down there.

sept. 18 | We reached Glamis at 0135 and immediately began to look for Scaphiopus couchi. A great deal of rain (1.70 inches) had fallen that evening (between 1600 and 1900), but

Sept. 18

Glamis area, Imperial Co., Calif.

the washes had stopped flowing by the time we arrived. Nevertheless, there were numerous puddles still standing. We drove north of Glamis toward Amos, but didn't hear a single S. couchi. We heard the first S. couchi call in a pool 1/2 mile S.E. of Glamis near the Glamis - Ogilby road. We captured 3 adults here before proceeding S.E. We looked for 1½ miles S.E. of Glamis without any further success. Then we returned to the pavement and headed for the Chocolate Mts. We heard S. couchi calling in the first tree-lined wash in Pergatory Flats (6 mi. E. of Glamis). We found one amplexing pair in a pool, as well as 6 individuals. We left the pair, hoping we could collect some eggs there the following morning (same day after sunrise). The air temperature at this time was 20.2°C. The toads we captured at this site (about 0200) apparently had just emerged. Several of them were dehydrated, and a couple of these had a dark covering over parts of their bodies, as though they had

Sept. 18

Glamis area, Imperial Co., Calif.

below in asphalt somewhere. A closer examination revealed that the dark material apparently was shed skin that had dried, but remained attached to the body. Some had only small spots of this material (around the nose, etc.), whereas one was nearly covered. We were anxious to see what was occurring east of the Chocolate Mts.; so we drove to the wash where we captured S. couchi in late August of this year. That wash still had water flowing in it, and we could hear S. couchi calling to the east. We pushed a car out of the mud & water in front of us, then tried to drive to Milpitas Wash. However, about 1/4 mile of the new pavement (~3 months old) was washed out 5 miles south of Milpitas Wash, so we didn't get a look at it this time. It was almost sunrise by this time, so we started back toward Glamis. We stopped at the wash 16 mi. N.E. to see what the pools looked like from which we had collected tadpoles in August. The wash of water had completely

Sept. 18

Glamis area, Imperial Co., Calif.

covered over the pools. However, water was flowing near the location of the pools, and we found 2 amplexing pair in this water. Lonnie was surprised at this, since he never found any of these animals active after sunrise in Arizona. These animals were found at 0700. These toads were captured for study in the laboratory. We wanted to use the eggs, if any were laid, for some experiments.

at 0730 we caught 2 amplexing pair at the wash in Purgatory Flats where we had seen the single amplexing pair a few hours earlier. Since no eggs were present in the pond, I feel certain one of the pair in the pond at this time was the same one we had seen earlier. One of these ♀ began to lay eggs a short time after we captured her. One of the ♀ from 16 mi. N.E. of Glamis began laying eggs about 0900. Neither of the other two ♀♀ laid before we reached UCR.

Many winged termites and winged ants (probably ~~Pogonomyrmex~~ ~~Pogomeamyrex~~) were out 16 mi. N.E. of Glamis. Many of the bushes had a swarm of ants flying about. In Arizona, these are eaten

Sept. 18

Glamis area, Imperial Co., Calif.

in large quantities by S. couchi, according to Lonnie. We returned to UCR at 1345 with 17 S. couchi, 8 of which were paired. The trip covered 418 miles.

Sept. 24

Lon McClanahan, Lloyd Tevis and I left UCR at 0015 in order to release some adult Scaphiopus couchi and see where they go. We reached Purgatory Wash (6 mi. east of Glamis) at 0430 and released the first toads at 0515, the last at 0640. By 0725 all the toads were buried, so we began looking for pools with tadpoles in them. The only pools with tadpoles we could find were against the east side of the Algodones Dunes. However, we heard of some others, but didn't have time to check them out. Everett Van der Poel told us of a pool 6 mi. N.W. of Glamis, & Saylor told us of a pool near Purgatory Flat, both of which had tadpoles in them. None of the washes we examined east of the Chocolate Mts. contained pools with tadpoles.

We returned to UCR at 1750 after a trip of 432 miles.

Oct. 14

Glamis area, Imperial Co., Calif.

Rudy Ruibal, Lloyd Tevis, Lonnie Mc Clanahan + I left UCR to try to dig up some of the Scaphiopus couchi we had released in Purgatory Wash 24 September 1963. Rudy, Lon + I left UCR at 0500 and picked Lloyd up at his home in Rancho Mirage. First we tried to dig up the toad that had buried itself in the sand bar. We dug down about 3 feet without finding any trace of it. Next we tried to find one at the south edge of a large ironwood tree, but again we were unsuccessful. We followed its hole down until it hit a root of the tree, which it seemed to parallel. We dug beneath and along side the root until we were about 3 feet beneath the surface. The next two animals we tried to find were buried in the bank of the wash. The toads could not have buried very deep at these sites because of the coarse gravel a short distance beneath the surface. The evidence indicated these toads had abandoned the burial sites after we left the area last time. The fifth animal,

Oct. 14

Glamis area, Imperial Co., Calif.
which had buried beneath an ironwood tree, also appeared to have abandoned its site after we left last trip. Consequently, we did not find a single one of the 5 toads we tried to dig up. We then showed Rudy the site 16 mi. N.E. of Glamis where we had found both S. couchi and Bufo punctatus. There was no water standing at any of the sites we investigated. We returned to UCR at 1700 after a trip of 402 miles.

Oct. 18

at 0030 I received a phone call from Ike (Dwight) Harris that it was raining in Glamis. Peter Allen, Dennis Miller & I left UCR at 0830 and picked up Lloyd Tevis on the way. We learned that Glamis had received 0.5 inch before we arrived. We looked for Scaphiopus couchi, and for places where they would be likely to be found all afternoon and evening (see field notes for S. couchi, pp. 19- for details). The only S. couchi found that day or night was a sub-adult ♀ that was 16 mi. N.E. of Glamis. One adult Bufo punctatus was seen 6 mi. E. of Glamis. Both were found at night. 0.12" of rain fell today.

Oct. 19

Glamis area, Imperial Co., Calif.

This morning we drove to the eastern edge of the algodones Dunes, 2 miles S.E. of Glamis. Here we found two pools that obviously had been produced in the September storm, since they both contained large numbers of adult fairy shrimp (Thamnocephalus platyurus). These shrimp were quite green when captured, due to green objects (Zoochlorellae?) within their appendages. None of the green was in the gut. Several young Scaphiopus couchi were found hopping about near the pools as well as up on the adjacent sand dunes. We returned to UCR at 1420 after a trip of 446 miles. I forgot to mention that I found the first giant red velvet mite (Dinothrombium) that I have seen in the Colorado Desert. It was walking across the mud by the sand dunes 2 miles S.E. of Glamis. Lloyd said that others probably would emerge today also, but we didn't have time to wait and see.

Identified by Dr. Ralph W. Dexter, Kent State Univ., Kent, Ohio

Oct. 20

All the tadpoles I brought back to the laboratory turned out to be Bufo punctatus. Two of them metamorphosed, all the rest died.

Oct. 24

UCR, Riverside Co., Calif.

Today I received a copy of the flow record of the washes south of Glamis that Lloyd Tevis prepared as we were returning to Glamis the afternoon of Oct. 18. The records were made by referring to the bridge numbers where the Southern Pacific tracks crossed the washes. These numbers, incidentally refer to the distance to S. P. headquarters in San Francisco (Glamis is 698.20).

The 5 washes nearest to Glamis had no flow. The records beyond, as far as we went, are:

Bridge	Remarks
699.22	good flow
699.56	very small amount of water
699.70	deep; some water; dunes near
699.89	small amount of water
700.11	very good flow
700.35	biggest flow of all
700.55	small amount of water
700.75	good flow of water
701.01	some water

Next 3 washes to the south had water, but we could not see the bridge numbers in the rain. We made no survey beyond that point.

Mayhew
1964

Journal

Mar. 23-25 Glamis area, Imperial Co., Calif.

Scott Fowler, Bill Crowley, Bland Ewing + I left UCR at 1025 to try to get some *Phrynosoma m'calli* to finish my oxygen consumption studies. However, it is still winter in this region. The minimum temperature we recorded on our trip was 28°F. Lots of flowers are in bloom between the Highline + Coachella Canals, but not many in the dunes. Only 2 *P. m'calli* were seen on the trip (both immature), + 1 of those was DOR. We saw only half a dozen or so *Uma notata* in the dunes, as well as an equal number of *Urosaurus graciosus*. Three *Uta stansburiana* were seen in the creosote area. That was the extent of the lizards seen on this trip. Several interesting birds were seen, however. A flock of about 50 lark buntings were feeding along the S.P. tracks about 1 mile S.E. of Glamis. Several Swainson's Hawks were present in the area just west of the Highline Canal. Several ground doves were observed at Indio on the way down.

Mar. 23-25 Glamis area, Imperial Co., Calif.
We dug up 2 more stakes where Scaphiopus couchi had buried themselves, but did not find any toads. Both sites were quite rocky about a foot beneath the surface.

I checked on the swallow (cliff) colony 4 miles south of Warner's Hot Springs on the way home. There are 62 nests in good repair beneath this culvert. I saw approximately 30 birds in the air while I was there, but I also heard quite a number in the nests. (Bridge D4.55 on S2).

We returned to UCR at 1830 after a trip of 483 miles.

June 3 Dave Reuther, Kenneth Evans and I left UCR at 0720 to get some Phyrosoma m'calli for a hibernation-light experiment. We reached the Highline Canal at 1030 and immediately started a pass between the canals. We found 3 DOR P. m'calli, but no live ones. The only live reptiles we saw were Dipsosaurus dorsalis and Callisaurus draconoides. Several of each species were seen before 1300. The air temperature (1 meter) when we began was 33.5°C.

June 3

Glamis area, Imperial Co., Calif.

Two live P. m'calli that I had used for an experiment were released 11 miles west of Glamis. They were toe-clipped # 112 (♂) and # 128 (♀). Thus, 40 P. m'calli have been released thus far in 1964 (3 in 1962). We made only one pass between the canals at this time (to 1200). However, we looked for P. m'calli again from 1540 to 1700. We found 1 additional DOR P. m'calli, but no live ones.

At 1700 we drove to the dunes to get a collection of Uma notata and Urosaurus graciosus. We captured them between 1700 and 1815. Then we collected Coleonyx variegatus between Glamis and the Highline Canal - along the Ben Hulse Highway (Imperial Co. S 78; Brawley - Blythe Highway) from 1930 to 2205. We captured 9 during the evening.

June 4

We looked for P. m'calli between the canals from 0700 to 1030. During this period we caught an adult Arizona elegans on the road 8 miles west of Glamis (at 0705). We caught 7 live P. m'calli during this interval. In the meantime Shirley Hill donated 2 P. m'calli to the cause that she had captured the previous day.

June 4 Glamis area, Imperial Co., Calif.

We collected additional Uma notata from 1140 to 1245, then again from 1415 to 1530. Then we looked for P. m'calli again from 1620 to 1730. One additional horned lizard was found during this period. No DOR P. m'calli were seen today. At 1730 we headed for the Ocotillo Well (San Diego Co.) area, which we reached at 1900.

June 5 Ocotillo Well area, San Diego Co., Calif.

We looked for P. m'calli (from 2 miles south of Ocotillo Well to the Anza-Borrego State Park boundary) from 0655 to 1000. We found 6 live ones (no DOR) during this interval. Then we headed home by way of Warner's Hot Springs. We checked the cliff swallow colony 3.3 miles south of Warner's, but we didn't bring any young birds back because they had just hatched. We reached UCR at 1420 after a trip of 482 miles. We captured 63 animals of 7 species on the trip, as follows:

Uma notata - 26
Urosaurus graciosus - 9
Coleonyx variegatus - 9
Phrynosoma m'calli - 16
Sauromalus obesus - 1
Arizona elegans - 1
Chionactis occipitalis - 1

July 2 UCR campus, Riverside Co., Calif.

The University finally accepted our outdoor lizard observation cages in the botanical garden today. We had lizards in the cages within 5 minutes of the time the inspector told us he would accept it.

Aug. 3 Palm Springs, Riverside Co., Calif.

Al Bennett, Ken Evans & I left UCR at 0720 to collect some lizards to use in the new outdoor cage (hereinafter called ROC, for reptile observation cage). We captured 13 immature lizards that we measured & released. We also captured 5 Uma inornata, 8 Dipsosaurus dorsalis, 1 Callisaurus draconoides, & 1 Phrynosoma m'calli that we brought back to UCR. In addition, we recorded the time that 46 lizards were active. Later we measured the temperature of 2 Dipsosaurus dorsalis continuously (Yellow Springs telethermometers) after they were released into their burrows. We measured the temperature of one for 20 minutes, the second one for 43 minutes. We returned to UCR at 1515 after a trip of 143 miles.

Aug. 18 Mojave Desert, San Bernardino Co., Calif.

Al Bennett, Ken Evans and I left UCR at 0610 to try to get lizards to fill some "holes" in my data.

Aug. 18 Mojave Desert, San Bernardino Co., Calif.

We began collecting along the road near Dale Dry Lake at 0800. The sky was completely overcast, so I was sure whether any lizards would be out this morning or not. However, we began to see Uma scoparia within 10 minutes of our arrival in the area. We collected in this location until 1115, by which time all lizard activity had ceased. Then we drove to the top of Sheep Hole Pass and looked for lizards until 1445. Following this, we drove to a spot near Don Brummel's cabin, 6 miles NE of 29 Palms, where we collected from 1500 to 1745. We spent the night at Indian Cove, just west of 29 Palms.

Aug. 19 We began looking for lizards as we started up Old Woman's Spring Road, between Joshua Tree and Yucca Valley. We collected along this road from 0730 to 1030. No lizards could be found after this time, so we drove on to Lucerne Valley. After lunch, we searched for lizards throughout the region from Lucerne Valley to Hesperia without seeing any animals. (from 1200 to 1445). Finally we saw a few lizards in Hesperia (around 1500). However, we were scheduled to be home

Aug. 19 Mojave Desert, San Bernardino Co., Calif.
before sundown, so we left the area at 1530. We reached UCR at 1630 after a trip of 307 miles. During this period we captured the following lizards:

Uma scoparia	28	(released 9)
Callisaurus	20	(" 11)
Sceloporus magister	2	
Uta stansburiana	9	
Crotaphytus wislizeni	1	
Cnemidophorus tigris	2	
Phrynosoma platyrhinos	3	(released 3)
Dipsosaurus dorsalis	9	(" 9)
Total	74	32

Lizards did not seem to be nearly as abundant in the areas sampled as they have in previous years. I'm afraid this current long drought is taking its toll of lizards in these desert areas.

Sept. 2 Glamis area, Imperial Co., Calif.
Al Bennett, Shirley Hill & I left UCR to try to get a September sample of Phrynosoma m'calli. We left the campus at 0745. We made one rapid pass between the canals, but saw no lizards (not even DOR's). We spent the afternoon in the Algodones Dunes observing the times that Urosaurus graciosus and Uma notata are active in September. However, I spent

Sept. 2 Glamis area, Imperial Co., Calif.

a portion of the afternoon digging into the dunes at several locations to check on the depth of the permanently moist layer in these dunes. I have soil sample data for a couple of years, but it was always measured at the same location. Today I dug in several locations. There was some variation from one location to another, but at all sites the depth varied from 12 inches (30 cm) to 20 inches (50 cm). The last rain that occurred here was on Feb. 29th (0.03"), so this moisture obviously is not just the remnant of that rain. The total rainfall recorded in my Glamis rain gauge in 1964 has been 0.46 inches. The total rainfall during the past year that has been measured in that gauge is 1.49 inches. Consequently, the very moist sand that I found in several places (every place I dug) must be at the level of the permanently wet layer. As this layer has been detected previously in the Sahara Desert, Arabian Desert + Egyptian Desert, its occurence here is not unusual. The sand between 30 and 50 cm. was quite moist to the touch, and was visibly damp. It appeared as

Sept. 2 Glamis area, Imperial Co., Calif.

beach sand does a short time after the tide has receded. After getting the needed information on Uma notata and Urosaurus graciosus activity in September, we drove to the eastern edge of the dunes (at 1530) to get some soil temperature measurements that the referee for my Scaphiopus couchi paper felt were needed. I dug a hole in the sand under the dense shade of a palo verde (Cercidium floridum) where the shade was essentially permanent (on north side of tree). Then I measured the soil temperature 50 cm. beneath the surface, since this was the deepest at which I found the permanently moist layer. At the same time, Al Bennett dug a hole in the sand that was exposed to the sun all day. This spot was about 30 feet from my hole. We measured the soil temperatures at the same depths at the same time. The readings were:

Shade	Sun
30.8°C	34.9°C

at the time the air temperature (1 meter) was 35.4°C. If the same measurements had been made at

Sept. 2 Glamis area, Imperial Co., Calif.
the hottest time of the day in mid-summer, the difference presumably would have been greater.
We did no night collecting this trip, so we established camp early in the evening.

Sept. 3 We began driving the road between the two canals at 0800. Very few Phrynosoma m'calli were seen all morning, even though we drove until 1100. By then the sand was too warm for many lizards to be active on it. We captured 2 adults (♀) and 2 juveniles during this entire period. One adult ♀ was seen DOR just after it had been run over. No other DOR's were seen. Relatively few lizards of any kind were seen while we drove the road — live or DOR.
After lunch we drove to Split Mountain Road, south of Ocotillo Wells, San Diego, Co., Calif. I have collected P. m'calli along this road in the past, so thought maybe we would do better here. However, we looked for P. m'calli from 1400 to 1800 without seeing one. We decided to set up camp at that time, so we pulled into Anza-Borrego State Park.

Sept. 4

Ocotillo Wells area, San Diego Co., Calif.

We drove the road between Ocotillo Wells and the state park from 0730 to 1005, but found only 2 juvenile P. m'calli during this time. Lots of Callisaurus draconoides were seen during this period, however. As we were having such poor luck here, I decided to drive to Palm Springs Panorama, Riverside Co., Calif. to see if we might be able to find some more there (we have captured several here in the past). We began looking at 1250, and looked until 1430, but didn't see one. We saw several Dipsosaurus dorsalis and a great many Uma inornata at this time, though. We returned to UCR at 1640 after a trip of 446 miles. We acquired only 6 P. m'calli and saw 1 DOR during the entire trip. This is the worst I have done since I began looking for these lizards in earnest 4 years ago. Fair numbers of Uma notata, Uma inornata, Dipsosaurus dorsalis, and Callisaurus draconoides were seen (also Urosaurus graciosus), however.

Sept. 10 Hesperia, San Bernardino Co., Calif.

Al Bennett, Shirley Hill & I left UCR at 1030 to get some observational data concerning the times that Sceloporus magister are active in the afternoon during September. We drove the roads in and around Hesperia from 1110 until 1715. A number of S. magister were seen during this period. We tried to capture only a few that we saw, however. We were successful in capturing 4 adults (2♂, 2♀) during the day. We returned to UCR at 1745 after travelling at total of 131 miles.

Sept. 28 Dale Dry Lake, San Bernardino Co., Calif.

The September temperature records for Uma scoparia were considerably lower than for adjacent months (including October), so Shirley Hill & I left UCR at 0910 to check on the situation. We captured 22 U. scoparia between 1110 and 1600, and measured the cloacal temperature of each. all of these temperatures were in the range of temperatures measured during other months, suggesting our previous September sample was not typical. We reached UCR at 1915 after a trip of 225 miles.

Oct. 2 Glamis area, Imperial Co., Calif.

al Bennett, Stewart Jacobson, Shirley Hill & I left UCR at 1650 to get an additional sample of Phrynosoma micalli. We reached the Glamis area at 2030 and camped for the night.

Oct. 3 We began looking for lizards along the road at 0810, and continued looking until 1130. One DOR P. micalli was found and 8 live ones were collected. Only 1 (♀) was an adult. about noon Carle Hodge (Univ. of Arizona Geochronology Lab.) met us as planned. After lunch we made one rather rapid pass (1400 to 1420) between the canals, finding 1 young P. micalli then. Following this, we looked for Uma notata and Uma gracilis in the dunes from 1430 to 1700. A fairly large number of young of both species were seen, but relatively few adults. The weather was nice and warm at the time. However, Shirley Hill's father told me later in the day that this was the first warm spell for some time. Night temperatures have already dropped into the 60's(°F) several nights.

Oct. 4 We looked for U. notata & U. gracilis in the dunes from 0830 to 1030. Carle left us about 0930.

Oct. 4

Glamis area, Imperial Co., Calif.

Again, relatively few adults were seen of either species. A section marker was found in the dunes about 1/4 mile south of the road, and approximately 6 miles west of Glamis. It was marked:

S36 | S34
T13S, R17E | R17½E

We made one round trip between the canals from 1030 to 1200, but found only 3 juvenile P. m'calli. We started back to UCR at 1230, reaching our destination at 1600, after a trip of 401 miles.

1965

April 25

Purgatory Wash, 6 mi. N.E. of Glamis, Imp. Co., Calif.

The field zoology class collected a number of small fairy shrimps from the pool about a mile from the highway (pool where we had found Bufo punctatus tadpoles in 1963). Water had been in the pool since April 4th. Ralph Depew (Kent State Univ., Kent, Ohio) identified these shrimps as Streptocephalus texanus. The ones I'd sent him earlier for identification (from Algodones Dunes 2 miles S.E. of Glamis) were Thamnocephalus platyurus.

1973

April 7 Algodones Dunes, W. of Glamis, Imperial Co, Calif.

A trip by dunebuggy was made appropiately 6 miles north of Highway 78 on the west side of the dunes, then across the dunes to the eastern edge. Then this route was retraced roughly over the same course back to Highway 78. Some time also was spent looking for animals in the creosote bush scrub west of the dunes as well as along the two canals (Highline, Coachella). I looked for animals in this area from 1015 to 1530. I have never seen the plants in such profusion. Oenothera deltoides are very abundant in the low areas of the dunes. Some Hesperocallis undulatas are over 5 feet tall this year. Abronia villosa was abundant (in cusota) when I was here on February 2 (1973), but has largely disappeared by now. Lots of new Helianthus tephrodes have ~~germinated~~ germinated this spring, but not many of this species are in bloom yet. The other perennials in the dunes look to be in fine shape. Animals seen on this trip were as follows:

April 7 Algodones Dunes W. of Glamis, Imperial Co., Calif.

Species	Canals	Creosote Bush Scrub	Sand Dunes
Uma notata			17
Callisaurus draconoides		1	
Cnemidophorus tigris		1	
Arizona elegans		1(DOR)	
Marsh Hawk			1
Cinnamon Teal	6		
Ring-billed Gull	1		
Mourning Dove	5	3	1
Roadrunner	1		
Western Kingbird	1		
Cliff Swallow	10		
Barn Swallow	2		
Tree Swallow	100+		
Starling	6		
House Sparrow	7		
Coyote			2

R-351

STEEL BACKPLATE

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